









1993

Walter D Koenig

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Sialia mexicanaHastings Reservation, Monterey Co., Calif.28 April

800. Box 256: 4 eggs. ♀ on nest, flushed.

12 May

915. Box 250: 5 eggs.

1010. Box 256: babies a couple days old. ♀ NOBA brooding.

I'd say: band by ~ 22 May at least.

1200. Box 259 (ARF, 100): ~~5 eggs~~! 3 nests up here!13 May1100. Natural cavity at Blomone (same <sup>old w/ky</sup> hole as last year) near box 213: 4 eggs. (Actually, in the middle of the triangle made by boxes 213, 202, & 332.)14 May1000. Box 45: Yellow a definite ♂; Red a ♂ (or, improbably, a very bright ♀).18 May

800. Box 259: still 5 eggs.

825. Box 256: 4 babies. Setting up to catch adults. Baby(1) is 20.0 gm

842: Caught ♂ NOBA. Now ♂ <sup>DB/DB</sup> <sub>LG/LG</sub> WL: 103 wt: 26.7 g#1998 2Y by 10<sup>th</sup> 10 Bled (#1)900. Caught ♀ NOBA Now ♀ <sup>LG/LG</sup> <sub>WH/WH</sub> WL: 99 wt: 29.1 g#1999 2Y by 10<sup>th</sup> 10 Bled (#2)

930. Box 250: v young babies; ♀ NOBA brooding.

20 May

1045. Natural cavity at Blomone: still 4 eggs. ("Box 213")

1240. Set up to catch birds at natural cavity at 309, which has 4 eggs + 1 baby, est 9 do.

1400. Caught the ♀ NOBA: Now ♀ <sup>or</sup> <sub>DB/DB</sub> WL: 100 wt: 27.0 g2Y by 10<sup>th</sup> 10 Bled (#1)21 May

1000. Back for the ♂ at 309 natural cavity (still 1 baby).

23 May1445. ♂ NOBA at 309 natural cavity (finally): now ♂ <sup>Y/LB</sup> <sub>LB/LB</sub> WL 99 wt 25.82Y by 10<sup>th</sup> 10 Bled (#1)

Baby also banded: 1311-94065/DB LP-DB BP-BLK/WL: 37 wt: 26.0 g (not sexable yet)

30 May

1300. 3 live + 1 dead baby (Red) at box 273; 5 babies at box 274.

22 July 1145. Box 59. Got camera. 3 babies:  
Yellow - ♂; Green & Red - ♀♀



1993

Walter D. Koenig

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Icterus gabula bulleri

San Antonio Valley, Santa Clara Co., Calif.

28 May

1100. While out here after Lewis' Winkers I bled a couple of nests that I could get to. The first had 3 babies (Nest 1)



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1993

Walter D Koenig

Agelaius phoeniceus

Laguna Conejo, Oak Ridge Ranch, Monterey Co., Calif.

11 June

Potter traps are out and baited. But where are all the birds? I only see a couple Red-wings walking around the pond in the afternoon. Is it late in the day? Early in the season? When did Uto come last year...? (There certainly are not nests out there yet...)

23 June

Still looks essentially deserted at Laguna Conejo.



1990 1991 1992

The very first thing I did when I came to the  
 new world was to find out how the people  
 lived. I found that they were very different  
 from the people I had known in the old world.  
 They were more free and more happy. They  
 were more kind and more generous. They  
 were more brave and more true. They  
 were more like the people I had heard of  
 in the old world.



1991

Walter D Koenig

PituophisHastings Reservation, Monterey Co., Calif.29 April

First warm/hot day since mid-March and at least 2 people reported gopher snakes today, so they're definitely out.

27 May

1125. Just saw the tail of a Gopher snake disappear into Gazebo's nest hole as I was going up to return the (just banded) 24 d.o. nestlings! Pulled him out - he was a good 2½-3' long, and moved him elsewhere. This nest is a good 30' up in a Valley Oak, by the way - not an easy climb by any means.





May 1913

Spent day May 1st collecting birds.

20 May

Annual excursion here for Lewis' Whelms.

May 1913. It as abundant as last year, but we did check 4 nests and stole the 2 smallest - chicks from one of these for examination for parasites.

6 July

One of the birds banded in 1912 was seen in the same nest.





1991  
1992  
1993

Walter D Koenig

## Odonata

Hastings Reservation, Monterey Co., Calif

3 June A lone Aeschna up at The remains of Soto Springs today at ~1100.

4 June 1130 (PST). One Plathemis ♂ and a Sympetrum at Blompond. The Plathemis was patrolling The entire pond. This is the first one I've seen This year.

9 June ~~1100~~ 1030. Swinging by Blompond there is 1 Aeschna, 1 ♂ Plathemis (sitting at The corner toward Hay-Blom), and 2-3 Sympetrum types. Pretty quiet!

1515. There are 2 nice fresh-looking Plathemis ♂♂ at Corral Viejo pond, which is low but still extant.

15 June 1000. Warm day, but only 1 Sympetrum-type on the pond. Certainly not a banner year.

3 July 830. 1 Plathemis and 1 Aeschna patrolling Blompond this morning. Also 1 Sympetrum-type there. All this even though it's quite hot today.

## 1992

23 April Several ♂ Plathemis patrolling on Laguna Conejo today!

7 May Lots of Plathemis (≥ 6 ♂♂) at Blompond this afternoon. Could be a good year once again.

## 1993

21 April A nice fresh ♀ Plathemis seen down along Big Creek today.

28 April 1300. Two ♂ Plathemis patrolling Blompond. 1 mating seen.

4 May 1500. A nice fresh ♂ Plathemis up on top of School Hill (by the big enclosure)



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1993

Walter D Koenig

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Melanerpes formicivorusHNHR, Monterey Co., Calif.28 April

Noticed on the way up to The Arnold that The ARF granary (to The R of the road just beyond turnoff to The Lichen enclosure) has fallen, presumably within The past couple months if not days.

6 July

Eggs in colony not yet incubated.

930. Added a baby (~1000) from Central Canyon to see if we can get the Lewis' to feed.

950-1100. Visiting Lewis' down. No sign of Lewis' yet.

immediately and we well into the swing of things by the end of the watch. No sign of Lewis' ad nest.

7 July

The baby is fine.

915-1015. Taped. No sign of Lewis'.

8 July

900-1000. Taped. One Lewis' at nest at the end of the watch.

The unmarked Lewis' flew almost to the hole, but soon being rebuffed by the Lewis' who kept him from landing or even getting near the hole. This was perhaps an attempt to be fed by the Lewis'. It suggests a relatively useful manipulation move the Lewis' can make. The Lewis' were by themselves for a while. Maybe they'll feed? I should try this soon. This one's persistent suggests they could be being kept away.

9 July

850. The "Chickadee" Lewis' who has been sitting in nest hole the last 2 days, was dead in the cage. This morning with pulse & heart on his head. Only 1 left.

845-1045. Removed Lewis' to adjoining cage; left the lone Lewis' here by himself at the hole. No sign of Lewis' at the nest however, making the hole more tempting.



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1993  
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Walter D Koenig

Melanerpes formicivorus

Buckeye

HNHR

5 April

1300. Came up here with everyone to check the hole: 2 eggs! Also, there are stores remaining here.

8 June

1600. After the failure of that 1<sup>st</sup> nest, I'm checking for a nest. No sign of anything, here or at Buckeye Annex.

11 June

900. Sat up here a 1/2 hr or so and checked all holes. Zilch. I did here a bird once. Note: stores do remain in the granary.

22 July

900. Stores remaining. No birds seen.

1994

19 January

1130. Nobody here on arrival, but the granary is quite full. (Certainly 4000+ acorns, as a rough guess.)

3 March

No sign of life over at Buckeye Annex, by the way. 1700. While showing Jeremy Chongo I heard a bunch of activity and could see 3-4 birds up at Buckeye Annex. I have no idea what was going on, but we do need to keep an eye on this area.

17 April

1545. Bird in hole in main (traditional) tree! Noone, however, at Buckeye Annex, although I flushed 1 bird on the way up to it from Chongo.

27 April

1840. Noone in the hole, which now appears to have partly fallen apart (but still possibly useable).

9 May

Plenty of stores remaining here.

1100. Things seem rather unsettled - a fair amount of chasing, garricks, etc.

25 July

The bad news: Many reports a NOBA juv here - but still only the "helper" ♀! Whadya whadya?! So we're up here this evening to see where they're roosting.





1994  
1995  
1996

Walter D Koenig

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Melanerpes formicivorus

Buckeye

HNHR

9 August

530. Ambushed at the old hole in the granary (where there are still plenty of stores) and got 2 birds - ♂ 2173 + ♀ 2091. Many saw kits here, but no luck catching them yet.

At least 2 NOBA juvs here.

12 October

600. Ambushed this morning at the one nice hole in the granary: Jennifer thought she saw 5 birds go in; we got 3, but 2 were the NOBA juvs! Also got ♂ 2174. Hope we can finally piece together what happened here.

The juvs were just beginning to molt - so they did probably fledge late this year (ie, summer).

1995

19 May

1200. Came over to Buckeye Annex after Pete saw a bird here, but nothing. Plenty of stores at Buckeye, however.

1996

3 January

1230. Definitely life here: granary is about 1/5-1/2 full. Hardly indicative of a good year, but ~~not~~ certainly not terrible.

11 April

1645. Bird in hole! No baby noises, though. Group here seems to have lost a big chunk of their granary (~400-500 holes), but still has acorns remaining.

1620. None over at Buckeye annex.

12 April

1245. Opened the hole after dragging the ladder up: zilch, but looks in reasonable shape.

21 April

None in any holes here

12 June

None in any holes, but there are still stores here. (This is a supplemented group).





1997

1998

1999

Walter D Koenig

Melanerpes formicivorusBuckeye

HNHR

9 May

945. Definitely youngish babies in the old hole in the upper Valley Oak up from the granary area.

1100. No! In new hole  $\frac{1}{2}$  way down! 3 babies ~ 13 do. (Band 17 May).3 July1430. Checked the (2<sup>nd</sup>) nest! ♂ 2174 inside! 4 babies, only ~ 2-3 do. At least one is unlikely to make it. Plenty of stores left here.9 July

1515. Hole empty! Actually, there were still lots of eggshells and one baby skeleton. In any case, the nest failed.

199821 April

1215. Lots of stores, but none in any holes.

199920 April

And again: Stores yes; birds in holes no.

7 July

Stores: yes.

[illegible]

A black and white photograph capturing a large, formal gathering of people, likely a political or diplomatic event. The crowd, composed primarily of men in dark suits and ties, is densely packed and fills a grand hall with high ceilings and ornate architectural details. The perspective is from a slightly elevated position, looking down the length of the hall where the crowd is gathered. The lighting is somewhat dim, typical of indoor flash photography from that era, creating a sense of a significant, high-stakes occasion.

1993  
1994

Walter D Koenig

Melanerpes formicivorus

Chongo

HNHR

21 January

1030. Counted stores: 1242. Tree is quite filled up here.

2 April

Lots of stores still here when Erik & I came by to add a feeder.

4 May

1545. No sign of a nest, but lots of acorns and even a bird up in the granary.

5 May

1930. 4 birds here, quite vocally, at roosting. Lots of karrits, pre-roost mounting, interference, and even chasing, but I think they all belong here. Three apparently roosted somewhere across the ravine, while I don't think anyone roosted in the granary - even though they spent all their time there until the last minute.

13 May

830. Checked both holes, which are empty. The top one (at least) is in excellent shape, however.

15 May

945. ~3 birds in sycamores. Flew across canyon, then returned to the granary. Still none in either of the holes, however.

1994

19 January

1100. Counted stores: 1557. Tree is pretty much full. Flushed 1 bird upon arrival.

17 April

1430. Checked nest here & measured eggs, of which there are 7. Sizes are: ① 26.5 x 20.5 ② 24.8 x 19.1 ③ 27.4 x 20.4 ④ 24.8 x 18.7 ⑤ 26.7 x 20.1 ⑥ 26.9 x 20.3 ⑦ 25.9 x 19.1. Stanback had marked the 1<sup>st</sup> 6; the 7<sup>th</sup> was new.

20 April

1630. Pulled the eggs for the ♂ removal experiment. Eggs put in incubator.

27 April

1315. Plan now is to try and get mate-guarding. To that end, Joey and I are here. Birds over beyond Buckeye Annex...



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1994  
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Walter D Koenig

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Melanerpes formicivorus

- Chongo ← has green mark on face HNHR
- (27 April) 1330. ① ♀ yel/m #2114. (helper) Also ② ♂ R-W(N)/DK #2175.  
1400. ③ ♂ mv/m #2326. ♀ NOBA here briefly ④ ♀ yel/ #1968.
- Birds mostly on other side of canyon.
1848. Bird in a hole in Buckeye Annex tree. (Not one of the opened ones.)
1900. Birds mostly roosted in the higher of the 2 old nest holes (!)
- 5 May 1445. The buggers ended up re-nesting in the (lower) old Buckeye Annex hole! Limb is pretty dead, but Joey helped me get up there with the help of 1/2 the 40' extension ladder hoisted up in the tree! They have 8 fresh eggs ① 28.0 × 19.9 ② 26.6 × 19.6 ③ 26.4 × 19.8 ④ 26.8 × 19.7 ⑤ 26.6 × 19.7 ⑥ 28.0 × 20.2 ⑦ 26.7 × 20.0 ⑧ 26.5 × 19.6
- 18 May 1030. Weighed the 6 babies (see Joey's notes for weights) One on the way out.
- 1 June 2000. Rooster was already in hole when I arrived. Markings are on back of page →
- 4 June 1300. Banded & bled the 6 kids, #2491-2496.

1995

- 3 February 1700. Counted stores: 1915. Tree is quite full still - virtually no sign of depletion yet.
- 22 May 1330. Set up to try and get the ♀♀ for blood at the nest. There are acorns remaining here.  
1500. Noone came! Ceiring up for now.

1996

- 3 January No acorns here. Ground empty. Group abandoned...?  
21 April Noone in any holes.

Rooste 1 June



Note angles  $\pi$



1997  
1998  
1999

Walter D Koenig

Melanerpes formicivorus

Chongo

HNHR

9 May

1700. Despite there having been no sign of life here all year, there was a bird in the old nesthole this morning and 5 fresh eggs! Note: There are no stores here. The eggs: ①  $24.3 \times 20.6$  ②  $24.5 \times 19.8$

21 May

1600. 5 babies, ~4-5 days old. Two were runty & on the way out so I pulled them for tissue samples. [Band ~ 6 June].

29 Aug

A couple of possible stored acorns, but basically they're out of stores here.

1998

21 April

1230. Stored acorns here, but no birds.

14 May

1530. Made it to the hole (over at Buckeye Annex) and they do have young babies, but I couldn't get to the bottom to find out how many there are.

26 May

1500. Opened the hole and set up for ambushing. Only 1 kid, ~17 days old (est. LFD  $\approx$  28 April)! Banded him as #2975.

1999

18 April

1920. Noone roosted on the Chongo side tonight. Also, there are no stores here, best I could tell.

3 November

Walked up here with Teresa. No sign of stores.



~~1992~~  
1993  
1994

Walter D Koenig

13

Melanerpes formicivorus

Plague

HNHR

21 January

1100. Counted stores: Main tree: 2564 } 3054.  
2° tree: 232 }  
Tel pole; misc: 258 }

There are a lot of acorns stuck in and around here.

3 April

Lots of stores here; also, a Finch effect.

1994

19 January

1200. Counted stores: Main tree: 2644 }  
2° tree 226 } 2970  
Tel pole, misc ~100 }

Trees are pretty full (90%?). Saw ♀ DB-or/m #973 while counting.

17 April

1500. Bird in hole over by the upper barn.

18 April

1030. Checked hole: 4 eggs, 1 a runt! Measurements:  
Runt  
① 20.5 × 16.0 ② 25.6 × 19.6 ③ 26.2 × 19.6 ④ 24.8 × 20.0

Eggs fresh.

31 August

715. After discovering NOBA kits here from a missed 2<sup>nd</sup> nest (!) I ambushed all over and got 6 birds (but missed several others), including 1 NOBA juv.

25 October

1600. Setting ambushes for the Japanese film crew, I noticed a dead bird in the new low hole over by the upper barn (below the 2 prior nest holes). I pulled out a bird #2277, a '93 Plague kid. She was at least a week old, I'd say.

26 October

At the ambushes this morning we only got ♂2428 (molting to ♂) at the upper barn and ♀2426 by the labs. Both were measured (♀2426 only bled) and released.



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FOLLOWING  
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A SUMMARY  
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1995

Walter D Koenig

Melanerpes formicivorusPlaque

HWR

3 February

1730. Finally got to count acorns, and there are indeed an amazing number here! I counted:

Plaque tree 5020 } 5525  
2<sup>nd</sup> tree, tel pole 505 } min.

The trees are loaded; given that it was getting dark, I bet there are even more here. Among other things there is an entire limb of the Plaque tree with holes I never noticed before!

9 May

1130. Opened both holes (the lower one is new) over by the Upper Barn - both are empty.

12 May

1230. Checked the 2 holes again: still both empty.

15 June

1700. Saw 4 birds: ♂♂ 2056, 2428, 2429, & 2430.

19 October

1400. Watching with Eric. Saw ♂ DB-W(N)/LP? ??#2278

② ♂ R-W(N)/R-W(N) ?<sup>2563</sup> New immigrants here, finally, along with a fair amount of activity.

③ ♂ M/WN-DB ?#2563

④ ♂ DB/M ?#2278 busy storing

No new ♂♂ after all (?) What about the ♀♀?

2 December

1700. I was sitting under the Plaque tree with the BBC photographer (Keith) when all of a sudden we heard a minor ruckus and out zipped a hawk with a screaming Acorn Woodpecker in its talons! It zipped over by the Upper Barn where we chased it, scaring it off the ground and up into the forest (with the woodpecker screaming again as soon as the hawk got up off the ground). Unfortunately we then lost it.

Bird was taken right out from the center of the Plaque tree!

The hawk was almost certainly a Cooper's, but I

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The first part of the report is devoted to a description of the  
general situation in the country. It is found that the  
economy is in a state of depression, and that the  
population is suffering from poverty and distress.  
The second part of the report deals with the  
social conditions of the country. It is found that  
the social conditions are very bad, and that the  
population is suffering from ignorance and  
superstition. The third part of the report  
deals with the political conditions of the country.  
It is found that the political conditions are very  
bad, and that the population is suffering from  
corruption and oppression. The fourth part of  
the report deals with the military conditions of  
the country. It is found that the military  
conditions are very bad, and that the  
population is suffering from the ravages of  
war. The fifth part of the report deals with  
the financial conditions of the country. It is  
found that the financial conditions are very  
bad, and that the population is suffering from  
inflation and unemployment. The sixth part of  
the report deals with the educational conditions  
of the country. It is found that the  
educational conditions are very bad, and that  
the population is suffering from illiteracy and  
ignorance. The seventh part of the report  
deals with the health conditions of the country.  
It is found that the health conditions are very  
bad, and that the population is suffering from  
disease and death. The eighth part of the  
report deals with the general conditions of the  
country. It is found that the general  
conditions are very bad, and that the  
population is suffering from all kinds of  
distress and poverty.

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1995  
1996

Walter D Koenig

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## Melanerpes formicivorus

Plague

HNHR

(2 December)

Didn't really see it well enough to be sure (it wasn't a Falcon certainly). Most interesting was the fact that the bird definitely screamed as he or she was taken out - no doubt but that it was some sort of last-ditch effort. (Unsurprisingly, none of the other group members, and at least 2 were in the Plague trees, followed or tried to interfere in any way.)  
Quite an event! One less bird here for sure.

1996

3 January

1500. Counted stores: Main tree: 1812 } 1924  
2nd tree, etc 112 } 1012

Not bad, considering I barely found any last fall. But mainly young birds in there.

7 May

1200. Bird in lower hole up by the Upper Barn: 4 eggs, fresh. I measured 2:  $26.6 \times 20.5 + 25.6 \times 20.8$ .

11 May

1930. Two birds rooked in the nest tonight: ♂1753 and one other, unfortunately unidentified.

12 May

1835. Tonight I did better. First, ♂2430 went in the hole. Then ♂2056 came, thought about it for a while, then left. Finally, ♂1757 came and joined ♂2430. The bottom line is, ♂1757 and ♂2430 rooked together in the nest.

13 May

The ♂ in the hole when I arrived at 1915 stayed. All I ever saw was ♂2056, who came very late but then left, possibly (apparently?) scared off by my light.

15 May

Tonight, ♂1757 spent the night in the nest alone.



1944-1945

The first part of the report deals with the general situation in the country at the beginning of the year. It mentions the fact that the country was in a state of economic crisis and that the government was struggling to maintain order. The report then goes on to describe the various measures that were taken by the government to deal with the crisis. These measures included the imposition of price controls, the rationing of food and other essential goods, and the establishment of a central bank. The report also mentions the fact that the government was seeking assistance from the United States and other countries. The second part of the report deals with the results of these measures. It mentions that the economy had begun to stabilize and that the government was able to maintain order. The report also mentions that the government was able to secure the necessary assistance from the United States and other countries. The third part of the report deals with the future prospects of the country. It mentions that the government was optimistic about the future and that it was planning to implement a series of reforms to improve the economy and the social situation. The report also mentions that the government was planning to establish a new constitution and to hold general elections. The fourth part of the report deals with the conclusion. It mentions that the government was confident that it was able to deal with the crisis and that it was looking forward to a bright future. The report also mentions that the government was planning to continue to work for the improvement of the country.

1996 Walter D Joering

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Nelaeus formicivorus

Plague

HNR

(15 May) replacing ♂2430, who came late and probably would have stayed but ♂1757 not come.

19 May 1940. Unless a 2<sup>nd</sup> bird went in quite late, ♂1757 was the only bird to roost in the hole tonight.

24 June 2006. Apparently ♂2430 <sup>roosted</sup> ~~spent~~ the in the nest by himself tonight, unless something else happened quite late. (2<sup>nd</sup> nest)

27 June 2005. Tonight it was again ♂2430 roosting in the nest by himself.

30 June 2005. And again: ♂ ~~Black~~ Red #2430, alone in the nest.

8 July AD. Banded and bled the 3 kids.

[illegible]

1997  
1999

Walter D Koenig

Melanerpes formicivorus

Plaque

HNHR

25 March

1145. Old hole over by Upper Barn: 3 eggs, fresh.

Measured one:  $26.4 \times 20.7$

3 April

1220. Still 3 eggs, incubated

6 April

1245. 1 baby (wt: 13.8g; ~3 db) and 2 dead eggs, both removed by me.

13 May

1245. Bled the 3 kids this morning; now I've caught and am removing - at least temporarily, the ♀ in hopes of ~~get~~ inciting some power struggle activity.

15 May

830. PS activity has been modest but detectable. Nest is fine.

OF <sup>DO/WH</sup> 16-DC/M #2702 (from Knoll). ♂ 2428 ♂ 2708

16 May

♀ Released this afternoon.

1999

16 May

900. A nice power struggle going on this morning - 12+ birds at least. Caught ♀ 2677 from SHill.

Also caught: ♂ 2056 (Breeder ♂ here)

♀ 2954 (sib of 2677 from SHill)

♂ 3060 (a Plaque helper)

♀ 2966 (a helper from SHill - not

seen since last fall)

7 June

After seeing a bird in the high hole again, I finally went up the Plaque tree & chopped it off. I found 2 shell fragments afterwards, so they did have eggs. Too bad! But there was really no way to get to that hole.





1997  
1998

Walter D Koenig

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Melanerpes formicivorus

MP Cavity

HNHR

24 March ~~1530~~ 1530. Opened their hole in the Blue Oak just up from the lab: 3 fresh eggs.

25 March 1200. Checked the nest: still 3 eggs. Measured one: 25.2 x 19.8 mm. Also, ♂2563 was inside incubating when I checked it. (He didn't flush!)

2 April 1300. 3 young (1 do?) babies. All looked about the same size.

22 May 1300. Opened another new hole here in the Blue Oak: 2 fresh eggs. (2<sup>nd</sup> nest).

30 May 1100. Peeped the hole: 3 eggs. Should hatch about 4 June.

31 May 1500. Finally measured the eggs: ① 24.5 x 19.7 ② 24.7 x 19.7 ③ 23.1 x 17.8

10 June 920. Hole is empty. Nest failed. We filmed up here, but I doubt that was it.

10 July Joey reports another nest in the 1<sup>st</sup> hole - fairly old babies!!

25 Aug There are still stored acorns in the locust here.

1998

28 April 1130. New hole! Opened it: 4 eggs, a couple days incubated. Measured all 4: ① 24.7 x 20.9 ② 25.5 x 21.4 ③ 25.6 x 20.2 ④ 22.1 x 17.6

10 May 1530. Babies have hatched! Watching now to try and get the ♀. Checked nest: 2 babies (~3 do), + 1 unhatched egg. Band ~ 28 May. ELED = 26 Apr.  
Seen ~~feeding~~ <sup>up the tree</sup> ♀2333, ♀2139, ♂2563, ♂2749, ♀2940, ♂2751, ♂2430, ♂2750.



1998  
1999

Walter D Koenig

2

Melanerpes formicivorus

Cavity

HNHR

11 May

600. Ambushed at last year's nest hole; got quite a set of birds. Held the breeder ♀ and 1 helper ♀ until 1030, but no sign of a power struggle. Weather is marginal, however.

26 April

1977

1700. Bird in hole (high hole - tag #273).  
Checked it: 4 eggs (incubated) plus a runt!  
(5 total). Measured one: 24.7 x 21.0 mm.

5 May

1500. Checked nest: 3 babies ~ 4-5 do, + the runt egg. Which I removed. Band ~ 21 May.

14 June

1400. Bird in hole (below 1st nest)!

1430. Checked it (hole #273): good shape but empty.

20 June

The hole with 1st 273 + 274 2/1/!





1993  
1994  
1995  
1996

Walter D Koenig

Melanerpes formicivorus

HNHR

Y

21 January

No stores here. Birds that come down here are presumably mostly Knoll "visitors" (actually, they've pretty much taken over The barn area, but are not storing in The locusts).

1994

19 January

1450. Again, no stores (or group) here.

1995

5 February

Some stores (maybe 1-200) in the locust next to the barn. Presumably Knoll...?

1996

3 January

1450. No stores here (actually, I counted 6, but I wouldn't swear they were good).

1450. But wait! Here's a bird in front of The barn! Who might it be? A Pileup bird, maybe? or are there birds here at Y/Knoll after all?



1993  
1994  
1995

Walter D Koenig

Melanerpes formicivorus

Knoll

HNHR

21 January

1200. Counted stores: Main Valley Oak: 1924 } 2126  
Along Wicket Hill (old)  
Other limbs (no nearest tree) 202 }

Doing well here, I'd say.

27 April

1100. Bird in high square hole (across from Lower Barn):

4 eggs, at least several days incubated.

By the way: plenty of stores left here. (There are even some in a crack in the telephone pole below box #11.)

1994

19 January

1450. Counted stores in the Valley Oak: 2080 } 2310  
Other limbs: 230 }

These facilities are quite full!

4 May

1000. Opened the (new) hole here across the creek from the Schoolhouse: 4 eggs, pretty fresh. Unfortunately, I wasn't able to get them out to measure, however.

12 May

1600. Checked nest: Nada. Another failure. Can't even be sure we had a complete nest.

Plenty of stores left here.

17 June

1220. Banded & bled the 4 kids from the <sup>low</sup> agave hole.

7 July

1100. Stores remaining.

1995

Still full!

5 February

1500. Counted stores: Main tree: 1962 } 1994  
Other limb: 32 (mostly fell since '94) }

Note that there are also some stores (maybe 200?) in the locust by the lower barn that presumably belongs to this group (?)

12 May

1300. Bird flushed from canyon hole - no doubt the nest.



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( 1)

1995  
1996

Walter D Koenig

2

Melanerpes formicivorus

Knoll

11th R

14 May

1300. Opened the Canyon hole: 4 eggs, incubated.  
Measured one:  $26.7 \times 20.1$  mm.

23 May

920. Checked nest: 3 babies, 1 unhatched egg. Largest baby weighs  $13.5g \approx 3$  days old. Egg removed.

11 June

1100. Banded & bled the 3 kids here.

No stores left in the granary here!

3 January

1300. Saw possibly fresh shells in the granary but otherwise it's empty. Are there even birds here?

24 May

1415. Opened the new hole in the 4 granaries: 5 eggs. Fresh. They were also big! The one I measured was a record  $29.4 \times 19.6$  mm!

28 May

1315. Checked the nest: still 4 eggs.

5 June

1230. Checked nest: 4 babies;  $10.5g$  ( $\approx 3$  days).

11 June

1800. Tried to get the ♀, but only ♂301 fed. Left up so she'll get used to the disturbance.

15 June

900. Got her! ♂2527 also fed.

17 June

1800. At roosting tonight, ♂2527/♂301 roosted along with an unidentified 2nd bird, blocked by ♂301.

18 June

2000. Tonight, ♂301 and possibly an unidentified 2nd bird roosted in the nest.



1998  
1999

Walter D Koenig

Uelaneipes formicivorus

Kutll

HNHR

8 May

1400. Opened new hole in locust closest to lab.

4 eggs, incubated. Measured 1:  $27.6 \times 20.3$ .

16 May

1700. Checked the nest - empty! A real-live failure. Plenty of stores here; weather's been terrible, but everyone else seems OK.

1 June

1100. Bird in same hole: 2 hatchlings + 2 eggs, 1 of which is undeveloped. I took & measured it:  $28.2 \times 19.8$ .

Band 21 June.

1999

11 May

1045. Bird in last year's hole: 5 eggs, fresh. Measured one:  $26.0 \times 20.0$  mm.

Stores: Yes.

19 May

Checked hole: empty! Tagged #289.

14 June

1400. 2<sup>nd</sup> nest in same hole (#289). 3 babies, ~5 do. + 2 eggs ( $26.9 \times 17.9$ ,  $27.5 \times 20.3$ ).

Band ~ 2 July.





1993

~~1994~~

Walter D Koenig

1

Melanerpes formicivorusCentral Canyon / Refute!

HNHR

3 April

This group supplemented with dog food; feeder put out today.

24 April

1400. Checked the hole in the CeCyn tree: 6 fresh eggs (#1-6). Are there 2 ♀♀ here? Bird was flushed from the hole.

21 June

MTS reports: acorns remaining here.

6 July

955. Stole the small nest of the 3 birds here for temporary transplanting to the aviary.

17 July

1400. Came to check the 2 birds. The nest is still in the aviary but they were both dead in the nest! Both corpses were quite far gone; they've been dead at least a week.

Wonder why they abandoned? Guess I'll leave the nest in the aviary.... (I'll bleed him tomorrow & give him a number).

2

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1994

Walter D Koenig

1

Melanerpes formicivorusRefute 1 (Central Canyon)HNHR10 April

1300. Came over here to check the old nest hole (Central Canyon tree) but it seemed as though the birds were more interested in a new hole several feet higher and facing HNHR. I checked both; both were empty. The new hole is in better shape, however.

Also, there are at least a fair number of acorns stored in and under the bark of this tree.

14 April

1130. Bird here, but none in the holes.

19 April

1100. " " " " " " "

21 April

1420. Bird in the (new) higher hole. Time to check again.

22 April

1500. Checked the (new) hole: 3 fresh eggs.

30 April

1430. 5 eggs now, incubated. Only measured the 2 new ones: ④  $26.2 \times 20.6$  ⑤  $25.0 \times 19.7$ . Does Joey have the measurements for the others, or did I not take them on the 22nd?

Still stores here.

29 May

1215. Checked 2<sup>nd</sup> nest: 1 baby, not weighed but certainly 2-3 days old, plus 4 unhatched eggs, 2 developed and 2 not.

Even if those last 2 hatch, I think they're too late. Only 1 kid a possibility here!

There are still stores here.

16 June

1100. Banded & bled the single kid. There are stores remaining by the way.

8 October

600. Got 2 birds in the upper hole this morning - ♀1325 and a ♂NOBA. Presumably the latter replaced ♂1525, but it's not clear he's gone as yet. We'll see... \*see Michael's notes.



1995 Walter D Koenig  
1996

Melanerpes formicivorus

Refute 1

HNHR

28 April

1030. Checked nest here (new hole in VC snag facing Corral Viejo)

5 eggs.

23 May

Banded & bled the 3 kids here.

26 May

Watched roosting here tonight: ♂ <sup>HNHR</sup> #1525 roosted for sure in the nest.

11 July

1300. Banded & bled the 4 kids here (2<sup>nd</sup> nest).

There are at least a few stores remaining in the tree here!

1996

5 January

1520. There are a few stores across in the granary here, as well as at least 1 bird, who I flushed when I walked over here.

28 May

1330. Watching.

1400. Watch was notable only for producing absolutely zippo in the woodpecker arena.





1997  
1998

Walter D Koenig

Melanerpes formicivorus

Central

~~Refuted~~ Canyon

HNR

27 March 1515. New hole! 4 eggs, incubated. I measured two:  
①  $26.1 \times 19.1$ ; ②  $26.7 \times 19.0$ .

2 April 1315. 4 babies, 1 (maybe 2) days old.

10 April 1315. Still 4 (healthy) babies. Weighed one: 36.3gm  
(est 9 days old).

11 April 1905. ~~Get~~ The rooster tonight: ~~Chick~~ #2209 for sure.  
1910. I take a look. In 1 hour, 2 birds apparently fly  
out of the hole. I sit back up but move around  
by 1930. Apparently the birds are there once. Are they  
old enough to make it? I'll check tomorrow and see!

12 April Joey checked the nest this morning. It was indeed  
apparently undisturbed all night, and the babies  
did not make it. Bummer. I guess I'd best not  
try to get roosters until later on in the nesting  
cycle, although I really don't understand how  
I could have scared them off - especially since  
I think one of them ended up roosting above my  
head somewhere.

We did at least get Floo's. It certainly demonstrates  
what I'd always suspected: They have to coordinate  
roosting in the nest perfectly - one mess up and they're  
gone for until the kids can thermoregulate on ~~their~~  
their own.

1998

11 May

1040. Checked nest: 2 hatchlings, 2 developed eggs. Band ~ 1 June.  
There are still stores here. Measured 1 egg:  $24.0 \times 19.5$ .



1999

Walter D Koenig

1

Melanerpes formicivorus

Central Canyon

UNK

27 April

1300. Stores: Yes! Bird in hole: Yes!

11 May

1230. Checked hole: 3 babies, ~5-6 do. Band ~26 May

26 May

1300. Banded & bled the 3 kids. Stores: Yes.

23 June

Still some stores left.

6 July

Stores: Yes





1993  
1994  
1995

Walter D Koenig

Melanerpes formicivorus

1500

HNHR

25 January

1600. Counted stores: Main tree: 2909 } 3161.  
2<sup>o</sup> tree: 252 }

There are a lot of acorns in the main tree here. No obvious depletion as of yet!

27 April

1445. Checked the traditional hole: 4 fresh eggs. (Bird in hole.)  
Also, there are quite a few stores remaining here. (This is also a supplemented group.)

1994

20 January

1450. Counted stores: Main tree: 2300 } 2544.  
2<sup>o</sup> tree : 244. }

Granary is doing well but is not completely full. Birds may have started to make a serious dent in it already.

30 April

1315. Opened the traditional hole - 4 eggs, incubated.  
Sizes: ① 26.2 x 21.0 ② 24.9 x 20.8 ③ 25.4 x 21.2 ④ 25.5 x 21.0

There are still stored acorns here also.

27 May

1300. Banded & bled the 3 babies here. Some stores still here.

1995

5 February

1530. Counted stores: Main tree: 2570 } 2638.  
2<sup>o</sup> tree: 68 }

Granary is basically full; the 2<sup>nd</sup> any tree is not, however. Capacity is pretty much the same as last year, I'd say.

7 May

♀1609, caught at the nest by Joey yesterday, was released up at Rancho San Carlos this morning. She's marked with green on her forehead in case she comes back. Eggs are just hatching (yesterday).



1995 Walter D Koenig

2

Melanerpes formicivorus

1500

HNHR

2 May

Power struggle here this morning! Jim watching. I came down about 945 and saw 10+ birds a good amount of chasing. Jim reports no activity at nest so I checked it: 3 dead babies + 1 unhatched, fertile egg that had been pecked at & broken. The latter is the only potential evidence for infanticide, I fear, as the kids were intact.

1130. Watching with net up. ① ♀ M/Or-DB #2502  
3 ♀♀ in Tree #2! ② Red/Or #2502 ③ ♀ DB-Or/Or-DB #2502(?)  
3 DB-Or/Or-DB also ③ ♀ LB/LG #2505 - 3 sisters

from WGate here! ♂2471 here!

In main tree: ♀ DB-WN(N)/DB #2330 (Sch Hill). Presumably some subset or all of the School Hill helper ♀♀ (there are 7!) here winning. ② ♀ Or/M #2567 (SHill).

1210. Caught ♂2471 in net - bled w/in 5 min for Plasma and released.

Jim's seen several more of the Sch Hill ♀♀. - 5 appear to have been seen (♀♀2210, 2330, 2555, 2556, 2567).

1230. ♂ in Tree 2: ♂ Red/DB ? ♂ DB/WN-Red #2471.  
M/Or

3♂ are mostly with the SH ♀♀ in Tree #1, coming to visit the WGate ♀♀ in Tree #2 occasionally. Still going well at 1245.

1315. 8 birds get together in tree #1: looks like 5 ♀♀ & 3 ♂♂, most likely the 5 Sch. Hill ♀♀

26 May

930 Watching. All quiet. There are still stores here.

① ♀ -Red/M & 2210 (from Sch Hill). ② ♂ Red/DB #1901

③ ? DB-WN(N)/DB #2330 (♀) going into hole! ④ ♂ DB/M #2473 (submissive to ♂1901).

⑤ ♀ LP/M #2556. At least 3 of the SHill ♀♀ still here!



1995 Walter D Koenig

3

Melanerpes formicivorus

1500

(26 May)

⑥ ♂ M/or #2471. ⑦ ♀ Or-DB/DB-or #2567 (SHill). Make that <sup>HNHR</sup> at least 4 of the SchHill ♀♀ here.

1035. Leaving. SchHill ♀♀ clearly have won and moved in here; at least 4 and maybe all 5. All 3 ♂♂ are still here; ♀2472, the daughter, is most likely gone.

♀♀ are interested in the hole and could try to nest fairly soon - might be fun to watch them try!

4 June

1200. Bird in hole! Checked it: 4 fresh eggs, (1 a runt).

I marked them - if nothing else we should be able to get an idea about how many ♀♀ are laying here.

5 June

730. In blind. ♀ in hole. (♂ now looking out of hole.

752. ♀ left. ♂ Red/DB #1901 near hole.

756. ♂ left. Now third bird (a ♀) looking out. 757. Leaves.

Hole now empty?

812. ♀ wn/Lght #2556 in tree

830. ♀ DA/LP #2210 enters hole. ♂ DA/Yel-Red #2471 here.

840. ♀ Red/Yel #2555 in tree.

852. ♂ ~~Or/DB~~ #1901 enters hole. ♀ now looking out.

♂ DB/M #2473 in tree.

900. Going to check the nest.

920.! 5 eggs - all 4 from yesterday + 1 new fresh one (marked #5). These birds continue to surprise me. Is there really only 1 ♀ laying here? No! See 7 June

6 June

1145. Checked hole: 3 eggs! 1 new (marked #6) and 2 from 4 June (both normal). This is getting interesting after all! 3 (inc. the runt) ~~was~~ have been tossed.

7 June

615. Watching nest. ♀ looking out.





1995

Walter D Koenig

4

Melanerpes formicivorus1500

Definitely here.

HNHR

(7 June)

645. ♀ left. In tree: ♀ DB/M #2380.

647. ♀ DB-W/NYDB #2330 enters. 650. ♂ 1901 enters. 657. ♀ leaves.  
 654. ♂ leaves. 656. ♀ 2330 enters. 701. ♂ DB/M #2473 comes to hole, leaves  
 w/o entering. 706. ♂ 2473 enters. ♀ LP/M 2556 here (but not in hole)  
 ♀ 2330 looks out, leaves. 710. ♂ leaves.

716. ♂ 1901 enters. 733. ♀ 2210 enters, leaves almost right away. ♂ LO.  
 737. ♀ 2330 looks in, leaves. ♂ leaves. 738. ♂ 2471 enters. 754. ♂ leaves.  
 757. ♂ 2473 enters. 801. ♂ 1901 comes to hole, ♂ 2473 leaves,  
 chattering submissively, ♂ 1901 enters. 802. ♀ 2330 enters, ♂ leaves.  
 805. ♂ 2471 enters.

808. ? Ori/Yell #2555 in tree.

811. ♂ 1901 comes to hole, ♂ 2471 leaves, chattering submissively.  
 ♂ 1901 enters.

815. Going to check hole. Note: since 645, the only ♀  
 to have been in the hole for more than a few seconds is  
 ♀ 2330. She's the only one who could really have laid  
 an egg. (Measured, see below)

830. OK. Hole still has 3 eggs, but! The one marked #6 also has  
 an "X" scrawled on the end (as do the other 2 - this is how I  
 marked the eggs on 4 June). So! In fact, here's what's apparently  
 happened here:

Size		4 June	5 June	6 June	7 June
	Egg 1	Runt. ---	Still here	(Gone)	
25.5 x 18.9	[Has small dent] Egg 2	Here ---	Here ---	Here ---	Still here
25.1 x 19.4	Egg 3	Here ---	" ---	Here ---	" "
26.5 x 19.7	[Marked #6 on 6 June] Egg 4	Here ---	" ---	Here ---	" "
	Egg 5		Laid today	(Gone)	

So - the only egg definitely tossed (besides the runt) is the one laid on 5 June

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1995  
1996

Walter D Koenig

5

Melanerpes formicivorus

1500

HNHR

9 June

1045. Checked nest (bird in hole) only 1 egg left - and the dented one at that! It's developing (opaque) but somehow I wouldn't put much money on this particular attempt.

12 June

1430. Checked hole: empty.

3 January

1835. No stores here! Group apparently abandoned! Long out, particularly since 1800 nest hole is actually doing reasonably well (but not great...). The bird!

19 April

1515. There's a formal beehive in the traditional nest hole here; what will the birds do?

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1997  
1998  
1999

Walter D Koenig

Melanerpes formicivorus

1500

WHR

30 March

1530. Bird in the traditional hole.

31 March

1200. Opened it: nothing yet; still needs some cleaning.

10 April

1100. Checked nest: 4 eggs, incubated.  $\text{D } 26.2 \times 18.6$ .

8 May

1100. Banded & bled the 3 babies: 2787 - 2789.

Plenty of stored acorns left here.

9 June

1315. 4 eggs (2<sup>nd</sup> nest). Same hole. Plenty of stores.

9 July

830. Banded the 1 kid. Still stores here.

1998

22 April

Plenty of stores and one fine fat badger here, but noone in any holes except (!) a Starling.

23 April

Cleared the Starling nest out of the hole.

1999

13 April

1500. Good number of stores remaining. Noone in any holes, however.

(1)

(1)

(1)



1993  
1994

Walter D Koenig

1

Melanerpes formicivorus

1800

HNHR

25 January

1530. Counted stores: Main tree: 1912 } 2092  
2° tree: 180 }

Doing pretty well. Granary is about as full as it's likely to ever be.

24 April

1600. Still acorns here. Checked the hole in the 2° granary: a Screech Owl! I couldn't reach the bottom, but I don't think there was anything else in there (the birds had been hanging out in/near this hole).

5 May

1430. Opened the <sup>new</sup> nest hole (in the main granary), where there are 4 eggs.

9 July

Some stores remaining.

1994

January  
20

1430. Counted stores: Main tree: 1790 } 1960  
2° tree 170 }

Granary is pretty full.

30 April

1330. Last year's nest hole has 5 fresh eggs. Sizes are:  
① 25.5 x 19.1 ② 25.0 x 18.9 ③ 24.3 x 18.6 ④ 24.2 x 18.6 ⑤ 22.8 x 18.6.

Plenty of stores remaining.

29 May

1525. Set up to try and get the NOBA helper ♂ at the nest.  
1600. Birds have been in the tree for some time, but still no feeds.

1620. Finally a feeding visit by ① ♀ R-W/M #787.

1635. ② ♀ M/DBlue #2273 in tree. ③ ♂ Red/DB-W(N) #2340 came to hole with food but did not enter or feed.

Still plenty of stores here, by the way.

1715. Quitting for now. Things are awfully quiet at the nest, although I presume it is active.



1994 Walter D Koenig

2

Melanerpes formicivorus

1900

HNHR

30 May

630. Trying again.

650. ① ♀ <sup>DB-YAL(N)</sup> Mr #2273 fed. ② ♀ 787 in tree.

730. Stanback just drove out - ~~head~~ leaving for the last time and heading back to Seattle. Summer!

745. Birds are flycatching in the tree but not feeding. Plus, I'm way too depressed to keep going. I'm going up to check the nest and (if they indeed exist) band the babies.

845. Well, I started to go up, only to hear babies in the nest, so I retreated, sought a bit of consolation from Janis, and returned with a porto-blind, which I've now set up in a bit farther away.

955. Got a bird feeding, but boy was I screwed up - it was ♀ 2273! So I let her go and took out the 2 (!) babies to band them.

2 June

840. Jeremy saw the ♂ NOBA feed several times yesterday, so I'm back to try for him again.

950. Got him!

29 July

1600.! Many found a nest w/ old kids high in a Valley Oak over near the creek. Came down to get it. One kid flew (well!) immediately upon trying to throw a string up. Rats. Got a 2<sup>nd</sup>, now #2554. So: fledged 2, (1 NOBA). If this is day 31, then hatching was ~ 29 June and LED 18 June.

24 December

700. An ambush in the rain at the granary nest hole! Got 4 birds, including yet 1 more juv NOBA, presumably from the late July nest (now 4, I believe). (+ 3 others)

2

1995  
1996

Walter D Koenig

Melanerpes formicivorus

1800

HNHR

9 May

1530. Checked nest, in last year's (granary) hole: 5 eggs, incubated. Measured one:  $24.4 \times 18.9$  mm.

15 May

1430. Checked hole: 3 babies, 2-3 to, no eggs.

4 June

1230. Banded & bled the 3 kids here.

3 January

1430. Counted stores: Main tree: 1575 } 1575  
2° tree: 0

The main tree is actually pretty full. I think the 2° tree has lost most or all of its holes; otherwise, there would probably be some there as well.

19 April

1530. Still stores left here. No one in any holes, though.

(1)

(1)

(1)



1997  
1998  
1999

Walter D Koenig

Melanerpes formicivorus

1800

HJHR

8 May

1015. Bird in hole (same as last year): 3 eggs, fresh.  
Measured 2: ① 23.9 x 18.7 ② 26.6 x 18.4.

14 May

1315. Still 3 eggs, now incubated.

9 June

1230. 1 baby, 1 egg (③ 25.0 x 19.1). Banded the kid.

10 July

1200. 2 fresh eggs! Still growing here. For measurements

see Joey's notes

25 July

1200. Nest empty. No sign of anything.

1998

22 April

Plenty of stores, but none in any holes.

1999

13 April

1500. Lots of stores. No one in holes, though.

30 April

1000. Checked hole: empty. Egg-tossing?



1994  
1995

Walter D Koenig

Melanerpes formicivorus

Horsetail

HNHR

21 January 1115. No stores here. Presumably no group, either.

1995

24 April 1400. Came by here to show Jim and found stores! A fair number of them no less! There is a group here.

25 April Jim watched and saw 2 birds (♀ banded) and evidence of a nest in the granary. So I checked it this afternoon, but it was empty. (It's a new hole).

3 May 1230. Bird in hole! Joey checked it: still empty!

12 May 1345. This time 4 (fresh) eggs. Measured 1:  $24.4 \times 18.2$  mm. Hole fell apart - I pried it back together but I'd be very wary about opening it again! (until banding, at any rate).

24 May 1015. Checked nest, where the kids have hatched (and are very young). I didn't open the hole, so I couldn't be sure, but there are certainly 2 kids plus, I think, 1 unhatched egg. It's possible, though, that there are 3 kids.

31 May 1500. Kid(s) OK. Set up ambusher

3 June 1440. Set up to catch the ♂ here.

1540. Got him!

12 June 1500. Banded and bled the 2 kids here, both of which were big & healthy.

There are, strangely enough, some stored acorns left in the tree here.

1996

3 January 1410. No stores here or sign of life.



1997

Walter D Koenig

Melanerpes formicivorusHorsetail

HNHE

12 May

1945. Watched roosting here tonight. Basically I neither saw nor heard any birds in the area. There was at least one bird up the side of School Hill; ~~the~~ best I could tell he/she headed up toward Sch. Hill West to roost. (This suggests that the birds I keep seeing in this area are Sch. West birds rather than Horsetail birds.)

Whether there's even anyone here at this point or not would even seem questionable. Birds certainly pass through regularly, but there's precious little evidence to indicate that someone really lives here at the moment, much less has a nest. (There are a few acorns still in the granary, but that's about it.)





1993  
1994

Walker D. Koenig

1

Melanerpes formicivorus

Hay-Blom

HNHR

29 January 1600. Counted stores: 4013. The tree here is loaded, so much so that it's hard to count. Tree is full, however.

3 April 1100. Lots of acorns still stored here.

27 April 1400. Opened a new, rotten hole I found yesterday in one of the trees between the granary and Soto Springs. It's empty, but in good shape.

30 April 900. Birds around, but none in the new hole I found.

8 May 1300. Birds roosting in the new hole several days ago, but nobody in it when I went by to check today.

13 May 1000. Watched for 1/2 hr or so. No sign of guarding or a nest. Birds just sitting & eating acorns in the granary.

20 May 1115. Bird in the new hole, finally.

25 May 1545. 4 eggs, opaque but clean (so maybe early-mid incubation?)

31 May 1630. 3 babies, chunky (~ 5 do?) Band ~ 17 June

1500 ~ 15 May.

9 July Stores remaining (plenty)

1994

20 January 1100. Fixed the nest hole (opening had fallen out).

Counted stores: 1918. Singularly unimpressive for this group; I estimate no more than 60% full.

1 April 1200. Bird in hole (HNHR tree facing granary - old nest hole)  
1700. Opened hole - empty (but in good shape).

12 April 1100. Stores remaining, but still none in the hole (or any others). Birds are hanging around the area, however.

3 May 1545. Noone in any holes. Watching for a bit.

1615. Birds here - seem to be doing absolutely nothing.



1994

1995

1996

Walter D Koenig

2

Melanerpes formicivorusHay-Blom

(3 May)

1619. Bird now in the old nest hole on HNHR side facing fence! HNHR  
That should be it!4 MayJoey checked the hole: 6 eggs, a couple days old.  
For measurements, see Joey's notes.29 May1400. Finally checked the hole: 4 kids. ① Yel 83.0 (44)  
② Wh 81.5 (44) ③ LB 73.1 (42) ④ NoBA 64.8 (33)5 June

1100. Banded &amp; bled the 4 kids.

21 July

Still stores here.

199512 April1445. Checked holes. Also; there are plenty of stores left here, although the granary is not particularly full - perhaps only  $\frac{1}{3}$  or so.26 May

1115. Still a few stores here. No sign of a nest, though.

4 June

1300. Several birds up along the fence line on the way up, including ♂ LB-Yel wh #1857.

19965 January

1430. Counted stores: 1100. Pretty bad, but it's a record for the year! (save Mayne).

19 April

1545. These birds are out of stores! Also, no one in any holes. I even watched for a bit, but didn't see zipper.

24 April

Opened the new hole in the Hastings tree, which was way deep (not a likely nest hole) and set an ambush there. Also, cleaned out the old nest hole, which had the beginnings of a starling nest in it.

29 April

1930. There were 5 birds here tonight, only 1 of which



1996

Walter D Koenig

3

Melanerpes formicivorusHay-Blow

5/1/96

(29 April)

Was definitely an intruder. However, only 3 appeared to engage in pre-mate mounting, so who knows. She's up with the 4th? In any case, they nested in a new hole in the various poison oak tree just east or west from the granary (see sketch).

4 May

530. An ambush at the new hole got 2 of the 3, including E1851 and the new ♀, and ♀2411.

13 May

Lower struggle up here - apparently ♀. Caught 3 birds (or 2, anyway).

14 May

900. Ambushed at the new hole in the Hastings tree. There was apparently 1 bird, who outlasted us - refusing to come out (except when she could climb back in the hole) by 900!

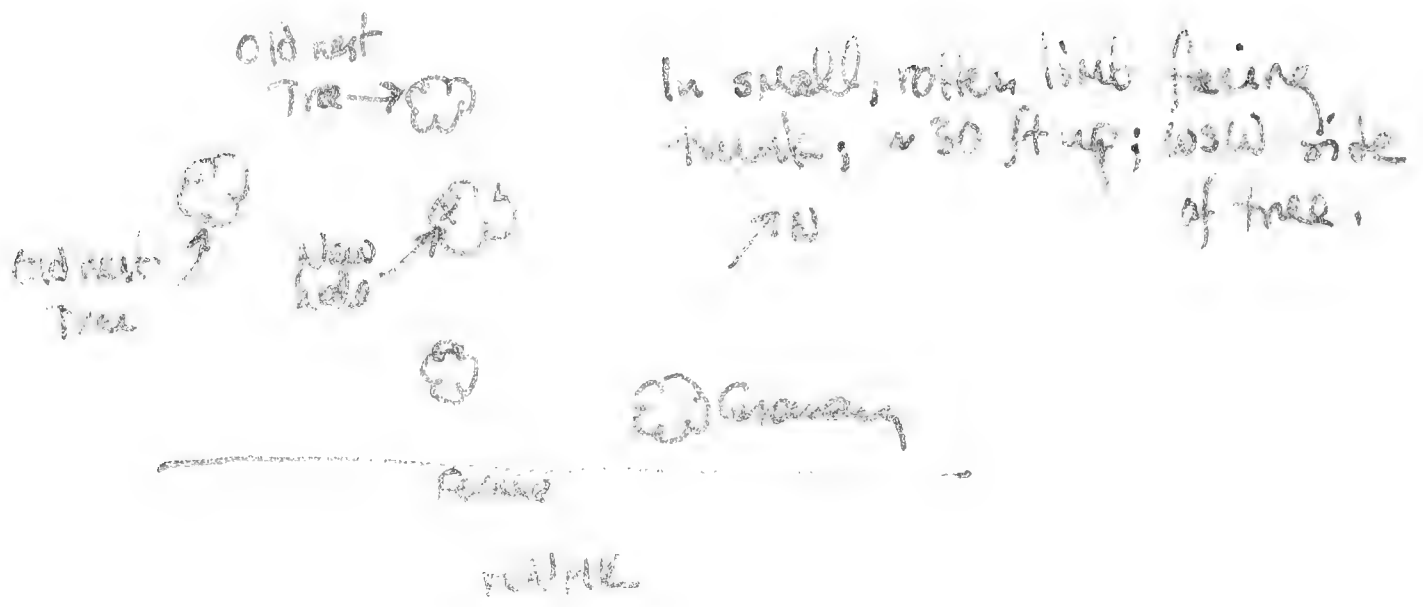
15 May

1000. Ambush at the new hole. Apparently 1 bird.

14 October

A nest! In a new hole over in the Valley Oak just down from the 2<sup>nd</sup> hole in the fence. And the big surprise is: 4 kids! About 28 days old.

29 April 1996  
New roost hole



1997  
1998  
1999

Walter D Koenig

Melanerpes formicivorus

Hay-Blom

HNHR

22 April

1150. Found it: a new hole in one of the big Vokes down below the granary.

1500. Opened it: empty. But a bird was in it again, so I'd say they are going to use it. This hole is way up there...

26 April

1600. Checked the hole (noone in it). Empty still. But it looks real nice!

28 April

1500. Peeped the hole: still empty, best I could tell.

6 May

1430. Bird in hole. Finally! 6 eggs, not fresh.

8 May

1000. Still 6 eggs. Measured one:  $26.1 \times 19.2$ . Looked pretty early in incubation still.

9 June

1100. Banded & bled the 4 babies here.

1400. Banded 4 (more) kids in an earthen field nest. Kids are ~ 27 days old. Lt D is ~ 28 July. There are still noons here.

1998

29 April

Stores remaining here.

1999

13 April

1445. Power struggle! 8-10 birds with good activity. Also lots of stores left and a Starling in last year's nest hole!

Not sure what sex is at stake here.

19 April

1100. Cleared out a Starling nest from the '98 hole (w/ 4 eggs). Still signs of a power struggle here.

6 July

Stores looks like they're out. No I think there are a few stores left here.



[illegible]

1993  
1994

Walter D Koenig

Melanerpes formicivorus

Lower Haystack

HNHR

29 January

Counted stores: Main tree: 1814 } 2184  
2<sup>o</sup> tree: 370 }

Not particularly impressive for this group. Granary, in fact, is only haphazardly stuffed with acorns, certainly not more than 1/2 filled. What's going on up here?

3 April

1100. Acorns remaining here - lots.

24 April

1430. Bird in traditional hole in the granary. Checked it: 6 fresh eggs, 4 of which are regular, 1 of which is quite small but still normal, and 1 of which is a definite runt.

27 April

1400. Bird in hole: still 6 eggs, including the runt. Eggs warm.

25 May

1500. Banded & bled the 4 babies here.

9 July

Stores remaining (plenty)

1994

20 January

1100. Counted stores: ~~1918~~ 1918. Not particularly full, but in decent shape.  
4250 { 3735 (Main tree)  
515 (2<sup>o</sup> tree) I est. ~80% full.

23 May

1630. Checked for 2<sup>nd</sup> nest: only sign was a bird flushed from or near the traditional hole (1<sup>st</sup> nest hole), but I checked it and it is empty.

Plenty of stores left here.

29 May

1410. Bird in the hole again, but - it's still empty (!)

5 June

1050. This time: 6 eggs, fairly fresh. ① 25.8 x 20.1

② 25.5 x 20.5 ③ 25.6 x 21.2 ④ 25.5 x 20.5 ⑤ 25.2 x 21.0 ⑥ 25.0 x 21.4

21 July

Unsurprisingly, there are still stores here.

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1995  
1996

Walter D Koenig

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Melanerpes formicivorus

Lower Haystack

HNHR

12 April

1500. Bird in hole in granary! Checked: 6 eggs, incubated. Granary here has a fair number of stores still, although once again, not as many as one might have expected. Tree is perhaps  $\frac{1}{2}$  full, no more.

17 April

Joey checked today, and found 7 eggs!!!! What happened? Could I have missed the 7<sup>th</sup>? He claimed none were runts (none of the 6 seemed so to me...). Hmm. Strange.

8 June

1200. Bird in (same) hole! Checked it: 8 eggs. First of any 2<sup>nd</sup> nests this year (and maybe the only one!)

13 June

1400. Still 8 eggs, incubated. Measured one: 25.2 x 20.5. Plenty of stores here.

20 June

1550. Checked nest: 6 kids, no eggs; 1 kid a runt no doubt on his way out. I weighed one of the other 5: 13.9 gms, making him probably 3 days old. (Band 8 July).

1996

5 January

1415. Counted stores: Main tree: 925 / 925.  
2<sup>o</sup> tree: 0

Pretty pathetic for this group, but it's still about the best going so far!

10 April

Some stores remaining here. But not a lot.

19 April

1535. Noone in any holes. Looks like a new one over by the saddle, however.

13 May

930. At least 3 birds here, but noone in any holes.

14 May

900. Checked the traditional hole (Joey had seen a bird in it earlier), but it's empty.

23 May

1400. 4 eggs, not hatched yet.

(1)

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1997  
1998  
1999

Walter D Koenig

Melanerpes formicivorus

1

Lower Haystack

HNHR

2 April

1430. Bird in the traditional hole. Empty, but it's cleaned out and ready to go.

22 April

1130. Checked the nest: 5 eggs (+ 7 acorns!?). Measured one:  $23.5 \times 19.2$ .

28 April

1430. 2 hatchlings + 3 eggs <sup>all</sup> just starting to pip. Will all probably hatch. Band ~19 May.

6 May

1145. Here set up to try and catch the ♀.

1415. Shit! Missed her. Giving up for today.

7 May

1230. Finally got her. Now ♀2777.

1998

29 April

Lots of stores left.

1999

13 April

1500. Lots of stores left.

11 May

1115. Bird in traditional hole. 5 eggs, 1 a runt (!) Fresh. Measured one:  $23.9 \times 19.7$  mm

6 July

Stores: Yes.

11

Handwritten text, possibly a signature or a name, written in a cursive script.

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1993  
1994  
1995  
1996

Walter D Koenig

Melanerpes formicivorus

Blomone

HNHR

3 April

1130. No stores here! Is there still a group around?

1140. Upon closer inspection, there may be a very few stored acorns remaining. In any case, a bird is here flycatching in the granary.

29 April

1200. This time I found a few stored acorns, but only a few.

25 May

1615. Checked the holes: 3 eggs, look opaque.

19 June

1500. Banded the 3 holes. All are still empty.

I could not find any remaining stores.

1994

1 February

900. Granary is not packed by any means, but has a fair number of stores. Tree is probably ~~100~~ 50% full.

14 April

1120. Still stores. No one in any holes, however.

19 April

1105. No one in holes.

9 July

1600. Quite a few stores left here.

1995

24 May

1200. Still no sign of a nest here. Some stores still here, though.

1996

5 January

1500. There are a few acorns stored here, but not a lot - 200 - 300 at most, I'd say.



1997  
1998

Walter D Koenig

Melanerpes formicivorus

Blomone

HNHR

- 2 April 1330. Bird in lower hole in main granary, I'm pretty sure.
- 3 April 1100. Opened the hole: 3 eggs, clear but dirty (?).  
Measured one:  $26.2 \times 19.2$ . Also cleared out a Starling nest in the upper (opened) hole with 6 eggs.
- 8 April 1000. Checked hole: still 3 <sup>warm</sup> eggs, still translucent ~~(not warm)~~. I think They're incubating, but that the eggs are all infertile. Next check we should pull them if there isn't any improvement.
- 10 April 1300. Still 3 eggs, but they finally look opaque and incubated, so I left them.
- 2 September 1500. Banded & bled the 2 babies in the fall nest! It's in the old hole way out on the limb facing toward Red Hill. The kids are ~13 days old, yielding an estimated LED of 9 August. They are #2956 & 2957.
- 1998
- 25 April 1100. Birds are very interested in something here, but no one in a hole. Lots of stores.
- 18 May 1400. Found the nest! In a new hole in a new tree, very near the granary (toward the road). I think They've been working on it - There's lots of wood chips on the limb below it. In any case, They have very young babies (hole needs opening). Band ~ 7 June.
- 19 May 1000. Opened the hole: 3 babies, 2-3 do. (1 smaller; possibly only 2 will make it).



1979

Walter D Koenig

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Melanerpes formicivorus

Blomont

HNHR

13 April

1400. A modest number of stores left. Noone in any holes, however.

15 June

1100. Out of stores. Still no sign of a nest.



1993  
1994

Walter D Koenig

Melanerpes formicivorus

Blomtwo

HNHR

3 April

No stores or sign of birds here.

29 April

1110. A pair of birds checking this place out. Both were banded.

1994

1 February

900. Granary has acorns! Is at least 50% full, and I flushed a bird upon arrival. There is a group here.

12 April

910. Stores remaining here. Noone in any holes, though.

19 April

1130. Noone in holes. Even checked the new hole, but ~~no~~ nothing in it. (It's in good, but not perfect shape, with some junk in the bottom.)

21 April

1430. Zilch.

18 May

1630. Noone in any holes. Also, no stores remaining!

This group has been supplemented with dog food, but I think this is one of the groups where crows have probably been eating almost all of it.

30 May

1700. Watched the Starling nest here for about an hour, but saw no sign of woodpeckers. Is the group even still here? There's not much indication that they are...

I take it back - 2-3 birds just greeted each other over toward the pond. They're probably here after all.

1745. One of the birds looks like he just flew over (toward?) (to?) Blomone. They may not belong here after all. No telling, since with no stores one wouldn't necessarily expect them to hang out in the granary that much.



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1995  
1996

Walter D Koenig

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Manerpes formicivorus

Blomtwo

HNHR

1 May

1400. We know there are birds here, but the group is pretty much out of acorns.

24 May

Still no sign of a nest.

5 January

1996

1452. No stores here; presumably abandoned.



1997

1998

Walter D Koenig

Melanerpes formicivorus

Blount

HNHR

30 March

1330. Bird in new hole

2 April

1400. Bird in hole again; opened it; empty but close.

8 April

1030. Bird in hole, but it's still empty. There are stores here, by the way.

1 July

1100. No stores left

1998

10 April

The granary here fell sometime during the winter storms. Group is gone, and presumably defunct.

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1993  
1994  
1995

Walter D. Koenig

Melanerpes formicivorus

Bluntlee

HNHR

28 April

Stores still remaining. The curved nest tree (~50m toward L.C. from traditional tree) has fallen within the past month or so.

29 April

1115. A bird flushed from the granary.

30 April

915. Bird in the traditional hole.

5 June

<sup>1530</sup>  
~~1530~~. Banded & bled the 3 babies. Stores still remaining. (A few, at least.)

17 July

Almost, if not already, out of stores.

1994

1 February

910. Granary is fairly full - certainly 1000+ stores here.

12 April

930. Still stores remaining here. No one in any holes.

Took down the Starling box in the traditional nest tree.

21 April

1435. ♀ <sup>Mauve/or-wh</sup> #2292. Bird flushed from traditional hole.

22 April

1530. Checked hole: 5 eggs, fresh. Measurements: ① 25.1 x 19.3  
② 24.1 x 19.5 ③ 24.5 x 19.2 ④ 24.7 x 19.6 ⑤ 23.8 x 18.4.

30 April

1500. Checked hole: 6 eggs, incubated. <sup>(laid 23 April)</sup> ⑥ 24.4 x 18.4  
Still stores here.

27 May

1100. Banded & bled the 5 kids here. Still plenty of stores.

9 July

1530. Some stores still here.

1995

24 May

Still plenty of stores here & no sign of a nest. Note that the top of the traditional tree has recently fallen, taking with it the old double-hole (used most recently last year).





1995  
1996

Walter D Koenig

2

Melanerpes formicivorus

Blomthree

HNHR

17 June

1000. Not more than a week ago I climbed up to the old holes here and did what I could to "close off" the top, which had broken off, hoping that this might make the lower hole useable. And voilà! There is now a bird in the hole!!

20 June

1615. Checked the hole - empty! Bummer—

5 January

1445. Granary is at most  $\frac{1}{4}$  full here - but at least there's something here.

30 April

1400. Bird in that's left of the traditional hole. Also, no stores left.

28 May

1445. Noone in any holes.



1997  
1998

Walter D Koenig

Melanerpes formicivorus

Blomthree

HNHR

30 March 1430. Bird in hole (old hole in traditional tree).  
Opened it: 1 egg, fresh:  $24.5 \times 17.4$  mm. (May be more than one - I couldn't quite get to the bottom.)

2 April 1400. Bird in hole.

3 April 1145. Peeped the hole: 5 eggs, apparently incubated

8 April 1145. Still 5 eggs, incubated.

30 June 1615. 3 eggs, incubated (2<sup>nd</sup> nest) (D 264 - 19.3)  
Still stores here.

9 July 1100. 2 babies, ~5 do. Still stores here.  
Banded ~25 July.

29 July 1400. Banded the 2 kids here (#2947-2948). Still stores.

1998

10 April The granary here fell during the winter storms.  
However, the birds still exist and have shifted at least some of their focus to Dark Hollow!

25 April Birds hanging out here. One seemed to fly out of last year's nest hole, so I checked it: I couldn't reach the bottom so I wasn't positive, but I'm pretty sure it's empty.

Even though their granary is kaput, they actually have some stores here in the tree back a bit in the forest!

30 April 900. Bird in hole!

11 May 1145. 5 babies, ~3 days old (1 fading). Banded ~29 May.

18 May 1345. Dead babies in nest. Exposure/abandoned.

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1999

Walter D Koenig

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Melanerpes formicivorus

Blondhree

HHR

13 April

1415. ♀ M / DBLW #?

In nest tree. A few

stores left here in the side area (old granary is defunct).

Early

Stores: out.



1993  
1994

Walter D Koenig

1

Melanerpes formicivorus

Gazebo

HNHR

13 May

1000. Bird in hole (same as used last couple years).

There are stores remaining here also.

14 May

910. Peeped hole: 4 eggs, not fresh (I don't think).

19 June

400. Banded the 3 babies. There are still a very few stores here.

17 July

1300. Fledgling in the hole. Also, I believe they are out of acorns here for all practical purposes.

1994

1 February

920. Granary limbs are quite full here. Certainly 2000+ stores.

19 April

1140. Plenty of stores remaining. No one in any of the easy holes.

21 April

1445. 3 birds flushed from an opened hole over toward CV Grande near the trench (just as it goes down). Birds flushed toward CV Grande - could be them??

1450.  $\geq 2$  birds in last year's nest hole.

22 April

1630. Checked hole: empty. At least 3 birds flushed on arrival, though.

29 May

1300. Checked hole: 4 babies + 1 unhatched egg.

① LB (25.8) ② Or (31.1) ③ Yel (26.3) ④ NOBA (20.2) <sup>unh.</sup> egg: 24.1 x 18.3

Plenty of stores remaining.

12 June

1200. Banded & bled the 4 kids.



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1995  
1996

Walter D Koenig

Melanerpes formicivorus

Gazebo

HNHR

12 April

1520. Checked holes. Also, there are stores here, but not very many - possibly only a few hundred.

28 June

Out of stores here.

5 January

1445. Granary areas are at least  $\frac{1}{2}$ -full here; not too bad, considering.

8 May

1530. Bird in hole. 7 eggs (1 runt), fresh. Measured them all: ①  $25.8 \times 19.5$ , ②  $24.2 \times 19.0$ , ③  $26.4 \times 20.4$ , ④  $23.9 \times 19.1$ , ⑤  $25.0 \times 19.5$ , ⑥  $19.7 \times 15.0$  ← runt, ⑦  $25.6 \times 20.0$ .

12 August

1530. Saw a bird in the hole this morning, so we checked it: 7 eggs, including a runt, fairly fresh. The 1st real full runt! Est. Laid: 10 August.

For measurements of 2 eggs see Tracy's notes. I removed the runt egg, by the way.

1. *Pharmaceutical industry* – The pharmaceutical industry is a major source of funding for research in the field of aging. The industry has a vested interest in developing new drugs and treatments that can improve the health and quality of life of the elderly population.

1997  
1998

Walter D Koenig

Melanerpes formicivorus

1

Gazebo

HNHR

3 April

1130. Cleaned a Starling nest (3 eggs) out of the traditional hole here.

8 April

1100. Bird apparently in a hole over in The Blue Oak on the other side of the pond. I pulled off a lot of the poison oak growing around the tree so it can be climbed next time.

10 April

1245. Bird in the hole across the pond again. Opened it: 7 ~~eggs~~ eggs, fresh. Measured them: ①  $23.9 \times 18.8$   
②  $25.5 \times 18.9$  ③  $24.3 \times 18.9$  ④  $25.0 \times 19.4$  ⑤  $23.9 \times 18.8$   
⑥  $22.8 \times 17.3$  ⑦  $24.4 \times 19.5$ .

12 June

2200. Checked up on the 2<sup>nd</sup> nest, which is hatching. They have 4 babies - one of which is dead already - and 2 eggs. ①  $24.0 \times 18.3$ . Will probably end up with 3 chicks.

1998

25 April

1100. Opened the hole (same as 1<sup>st</sup> nest in 1997): 1 fresh (normal) egg. I bet they're egg-tossing.

lots of stores. I also cleaned out a Starling nest from the old nest hole in the central area.

29 April

1530. 5 eggs! Apparently they are not joint-nesting here. In any case, I took one of the eggs, which happened to measure  $24.8 \times 19.1$  mm. (only 4 left).

11 May

1125. 3 hatchings + 4 infertile (or at least undeveloped) eggs. They were joint-nesting here after all, apparently.  
Band: 1 June.



1999

Walter D Koenig

1

Melanerpes formicivorusGazeboHNHR13 April

1430. A good number of stores left here. Noone in any holes, however.

11 May

1130. Bird in hole (♀ OS-wh/or #2283). (Hole by Vernal Pool). Checked

12 May1215. ~~Opened~~ The hole. 5 eggs, incubated. Measured two: ① 24.7 x 18.6 ② 25.5 x 19.7.19 May

1145. 4 babies 2-300, + 1 unhatched egg (infertile). Band ~ 6 June.

6 July

Stores: Yes (lot).





1994  
1995

Walter D Koenig

Melanerpes formicivorus

Los Arbolitos

HNHR

20 May

This new group, wedged in between CV Cerante and Cezebo, had a nest <sup>with</sup> 8 eggs! Today at 1045 I checked it for hatching. 5 eggs had hatched; possibly yesterday. The other 3 (#2, 7, 8) were all developed and may still hatch. #2, a very small egg that I might even have thought a runt, is even pipping.

Babies were too small to put bands on.

25 May

1700. 5 babies + egg #2, pipped but unhatched.

① LB (22.8) ② BLK (23.9) ③ Or (24.8) ④ LP (24.5) ⑤ NOBA (17.1)

9 June

1330. Banded & bled the 5 kids.

15 June

Jeremy reports that they are feeding acorns at the nest here!

7 October

615. Ambushed the nest hole this morning, nabbing 6 birds - 2 adults and 4 of the spring kids! Where do they all hang out??

1995

12 April

1530. As reported by the winter FAs, these birds do have a granary - the large ~~star~~ VO just across the fence (and on the S side of the road) from F Troop. There are at least a couple of hundred acorns still in it. No one in last year's nest hole, however.

1 May

Still stores here. No nest yet, though.

24 May

1140. Checked nest (in same hole): 3 babies, all about the same. One weighed in at 15.2 gm  $\approx$  4 days (maybe only 3). Still some stores here.



1997  
1998  
1999

Walter D Koenig

Melanerpes formicivorus

Los Arbolitos

HNHR

16 April

1500. Checked the hole (2 birds flew out): still empty.

9 July

1030. No birds in hole, but there are still acorns here.

1998

25 April

1200. Checked traditional hole after seeing a bird in it yesterday: 1 runt egg (fresh)!

There are stored acorns remaining here.

29 April

1600. Only 3 eggs! Measured one:  $24.6 \times 19.4$  mm.  
est hatch date: 8 May.

19 May

1015. 3 babies, ~ 800! Band ~ 1 June.  
(eyes not open)

1999

13 April

1430. A good number of stores here. No one in the hole, though.

11 May

1200. Bird in traditional hole: 3 eggs, dirty but undeveloped. Infertile?

Measured them: ①  $24.4 \times 13.9$  ②  $23.5 \times 20.5$  ③  $27.1 \times 21.3$

Quite a range in size!

6 July

Stores: yes.



1993  
1994

Walton D. Koenig

Melanerpes formicivorus

CV Range

HNH2

10 July

900. Stores remaining here.

1994

11 April

1600. Checked nest: 5 eggs, still look fresh. I can just reach them.

14 April

845. Bird in hole. Went up and pulled the 5 eggs, moving them to the incubator in hopes of getting blood/tissue from them eventually. In the meantime, the idea is to make these guys re-nest, giving us a chance to do some mate-guarding watches and to temporarily remove one or both of the young ♂ breeders prior to re-nesting.

Size of eggs: (1) <sup>Pretty clean</sup> 23.9 x 18.8 (2) <sup>Pretty clean</sup> 24.2 x 20.3  
(3) <sup>A tad dirty</sup> 25.5 x 19.5 (4) <sup>2<sup>nd</sup> most dirty</sup> 25.4 x 20.0 (5) <sup>Dirtiest</sup> 24.5 x 20.1

Note: There had been ♂ egg-tossing seen here prior to incubation! See Mark &or Jeremy's notes.

18 April

Ambushed this morning, catching all 5 birds (♂ 1079 is gone). We removed [only] ♂ 2038, one of the 3 breeder ♂s here. (Note: the other young ♂, ♂ 2172, tossed 2 eggs [1 a runt] from the 1<sup>st</sup> nest!)

20 April

♂ 2038 died last night. Pisser.

21 April

Three birds, probably from here, in hole (mid-afternoon) over toward Gazebo. See Gazebo notes for details.

12 May

900. Watching. ① ♀ in #2026. Note: we've had the 2<sup>nd</sup> sub. ♂ (♂ 2172) in captivity for <sup>~2</sup>over 2 weeks now [see MTS notes]. He was caught in one of the Bower Struggles that took place after the 18 April ambush.

20 May

930. Found the new roost hole, in forest near traditional tree

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1994

Walter D Koenig

2

Melanerpes formicivorusCV GrandeHNHR

(20 May)

Hole is deep but I don't think there's anything in it.

25 May

1655. Bird in the new hole!

27 May

1030. Bird in hole! Checked it: 5 eggs, fresh!

① 23.9 × 19.5 ② 23.7 × 19.5 ③ 25.0 × 20.6 ④ 23.4 × 19.0 ⑤ 23.8 × 19.5

29 May

1310. Noone in the hole (?), but still the 5 eggs.

30 May

1310. Finally let ♂2172 go (marked with green paint).

The plan is to tape the hole continuously, but the batteries are screwed up and ~~to~~ in conjunction with today's thunderstorms (!), we only got intermittent watches on the nest.

It did, however, have 5 eggs when I released him, and Katy confirmed this morning that they were incubating.

31 May

Katy watched &amp; did see a bird roost in the nest last night.

Today, though, things have been unclear. As of noon or so, based on Jeremy's watch from 0600 ~ 0900 and tapes subsequently, there has been but 1 visit to the nest so far - by ♂2172! He stayed inside for ~10 minutes but did nothing else!

But why is noone else coming to the nest? It would really be a bummer to have them abandon it. I checked at the 1445 tape turnover and all 5 eggs were still there.

! ♂2172 tossed all the eggs this afternoon!

Katy had the 1<sup>st</sup>; the others were between 1754-1806.

See back for details.

28 June

1615. 3 kids in the new hole across the road <sup>WC</sup> up the hill found by Katy this morning: ① Y (42.1, 20) ② DB (38.8, 19) ③ LG (35.1, 17)

~9-10 do.

ELED ~ 7 June



30 May Tapes of nest

1315-1415 (1 visit by ♀ only)

1520-1522 (Zilch)

31 May Tape of nest - 1 egg tossed by ♂2172 previously

1703-1808

1735 ♀ enters 1744 leaves

1754 ♂~~9~~ enters 2172

Threw one egg out! It just flew out of his bill!  
1755 Flew off with a 2<sup>nd</sup> one!

1756. ♂ enters

1802 ♂2172 at hole, wakes, looks in, leaves.

1803. ♂2172 enters ~~looks out~~, leaves,  
star ♂ leaves!

1805. ♂ leaves with egg! Presumably ♂2172  
but couldn't positively ID him

1806. ♂2172 enters again, leaves with  
the last egg.

1806. ♂<sup>2172</sup> enters

1808. ♂<sub>2</sub> enters } both in together!  
tape ends!

1994  
1995

Walter D Koenig

3

Melanerpes formicivorus

CV Grande

HNHR

(28 June)

1900. ♂ Or-wh/M #1616 roosted (alone) in the nest tonight.

7 July

1900. Not sure which ♂ roosted tonight - if I had to guess, I'd say it was ♂ ~~Or-wh~~ M/Da #2172 but the look was very short. Also, I actually had a slightly better look at his left leg, and what I saw suggested the presence of a split band - hence #1616. I'll have to try again.

9 July

900. Banded & bled the 3 kids.

1900. Watched roosting tonight: ♂ 1616 definitely was the one roosting.

25 July

Stores remaining.

12 April

1995  
1530. Noone in any holes, but several are now "gone", including:

- 1) Nice hole in VO above pond - taken over by beehive
- 2) 2<sup>nd</sup> nest hole (194) across road - fallen.

However, the granary is doing well, and is fairly full of stores.

15 May

1400. Opened the hole, over by the creek in the old Live Oak nest tree (but a new hole) found this morning by Jim: 2 kids, bandable (maybe ~18 days).

18 May

1400. Banded & bled the 2 kids.

17 June

1130. Bird flushed from hole on side of hill toward CVette! Babies! Checked hole: 4 kids, largest 37.8g (~9 days). Also pulled ♂2550 (helper) from the nest.



1996

Walter D Koenig

1

Melanerpes formicivorusCV GranaryHNHR12 April1425. Bird in the live oak hole over by the creek. First nest of the year? These birds ~~do~~ have some acorns left.11 April

1530. Checked the hole: 6 eggs, incubated. I measured 2 of them (they all seemed normal); see Jerry's notes for the values.

3 MayThe birds ~~do~~ have some stores remaining.  
945. Banded a bit the 4 babies here.7 May♂1616 roosted in the nest tonight by himself.  
(Got a good look at ~~0-114~~ from the far side of the creek.)8 May

Honey. roosted in the nest tonight with the kids...

17 May

2210. 1st morning, acorns almost gone. 1st day, 1st hole has been taken.

29 OctoberWith apparently a missed fall nest here, we ambushed at the hill hole (over by CVette) where we got ♀2668 (a kid from last spring), and also at the new hole in the only remaining large Valley oak in the F-troop area, where we got ♂2550 (~~also a~~ <sup>1995</sup> kid) and a ♀NOBA (now ♀2737)! Who's this? Is ♂2550 budding off up here? And where are the fledglings...?!19 December

Our friends over on oak ridge had the poor taste to cut down the granary here today. Poor things. No telling what will happen here now!



1999 Walter D Koenig

Melanerpes formicivorus

Observations

19 May

Still some stores in the hubs we put up in the old nest tree on the side of the hill. No more in any holes, however.

11 June

Found the nest - in a new hole, over by the road up a bit (see map on back). Examined the 3 kids, Presumably, this is the same hole we missed last year.

13 November

Amber's (AM) The old hole in the hillside from the old nest tree. Getting 2 of the kids from this year, the 1st AM is presumably not the same, a bit from the nest. She only had 1 egg left, and so finger to look carefully to make sure she was an adult, but we'll assume she's one of them for the time being.

1999 Nest

1999  
Nest



1997

Walter D Koenig

1

Melanerpes formicivorusCV Popuito ~~(Koenig)~~HNHR2 April

1400. Bird in new hole in the CV Popuito tree.

4 April

930. Opened the hole: 6 eggs (all normal). Measured two: ① 26.9 x 19.1 ② 27.4 x 19.6.

16 April

1415. Checked the nest: 5 babies. Weighed 1: 11.9g (~2 do).

3 May1030. No birds in holes. ~~21 9.7 21 13.2 21 13.2 21 13.2 21 13.2~~



1994  
1995  
1996

Walter D Koenig

1

## *Melanerpes formicivorus*

Murf

HNHR

20 January

600. With 2 NOBAs here, presumably from a late summer nest, I ambushed <sup>at</sup> ~~in~~ one of the opened holes and got ♀2151 and a jNOBA (now 2339), who was quite scruffy on the crown where she was molting, apparently (but not absolutely positively) to a ♀. Could she have been from a fall nest?

12 April

1030. A few, but apparently not many, stores left here. Noone in any holes.

17 May

500. Ambushed the old horizontal nest hole in the lower tree and got ♂1954 - who we are temporarily removing - and ♂2341 (a helper) - who MTS will lap.

19 May

On top of everything else, ♂1954 was dead. Sucks. Moral - take nothing for granted the first several days. I think this guy may have gotten stuck somehow, not starved. But captives must be checked regularly (he had gained weight his 1<sup>st</sup> day in captivity!)

3 June

1015. Walked through here, but didn't see anyone in any holes. Also, they appear to be out of stores, even though they were a supplemented group (a manoeuvre that didn't seem to work very well this year, I fear).

1995

17 June

1030. No birds in holes. Also, no stores left here. Apparently they are not going to attempt a re-nest.

1996

5 January

1830. Ambushed the down-facing nest hole tonight, nabbing ♂2536 - the only bird here. Ellen hasn't been able to ID



1996

Walter D Koenig

2

Melaneris formicivorusMurfHNHR

(S. Samu) him, as it turns out because his LL band is 28-Yd(N), not 28-Yel as ~~was~~ in the computer - and as written then when he was banded in 1994! (His band # was written wrong as well!). One mystery solved, at least.



1997

1998

1999

1997 - 1999

Helianthus

1997

1998

1997

110. 110 stores here but I can tell

1998

25 April

1215. Stores here. None in any holes, though.

1997

19 April

110. 110 stores here





1993  
1994  
1995

Walter D Koenig

Melanerpes formicivorus

CVI

HNHR

14 May

900. Banded & bled the 6 babies here. (Do they all belong here or did Mark transplant any?)

19 June

1540. Stores remaining here (a fair number).

10 July

910. " " "

1994

12 April

1020. Still stores here. Also, flushed a bird from the old nest hole low in the granary (facing back toward the trunk).

1600. Opened the hole: 6 eggs, not clean but still translucent (inc. for 1-2 days, probably). Measured the eggs:

① 25.9 x 19.3

③ 25.8 x 19.7

⑤ 26.1 x 19.9

② 26.2 x 19.5

④ 24.4 x 18.7

⑥ 25.6 x 20.0

12 May

940. Note: nest failed after hatching for unknown reasons [see MTS notes]. Plenty of stores here, but no sign of a re-nest.

20 May

1130. Found the re-nest - or at least a ♀ in a hole - over by the windmill. No sounds when she flushed, so probably eggs.

23 May

1000. Opened the hole: 6 eggs, look almost ready to hatch.

3 June

1000. 4 babies: ① LB (56.8) ② YL (54.6) ③ LP (60.6) ④ NOBA (58.2)

Band ~~~ 13 June~~ ~ 13 June.

25 July

Stores remaining.

1995

6 June

Put the back back on the windmill hole.

17 June

Although there's no sign of a re-nest, there are some stores left here.



1996 Walter D Koenig

Melanerpes formicivorus

CVJ

HNH

10 April

No stores appear to be left here.



1997  
1998

Walter D Koenig

Melanerpes formicivorus

CV1

HNHR

14 May

930. Opened the nest, which is in a small dead limb in a Valley Oak over by The Windmill. They have 4 babies (possibly 5 - I couldn't quite reach far enough to be positive) that are ~ 4-5 days old (band ~ 31 May).

31 May

1600. Banded & bled the 4 babies here.

9 June

1110. Plenty of stores here, but none in new holes.

1998

25 April

1220. Plenty of stores.

20

April

1110. Bird was with a 'primary' store. No

12 July

750. No stores in old holes, but I think they have something new. Still stores.

23 November

Antushed this evening, getting all 4 birds, including the 2 new (?) NOBA 30's.



1993  
1994

Walrus 30 Koenig

Melanerpes formicivorus

CV2

HNHE

17 July

1300. Stores remaining. No sign of a 2<sup>nd</sup> nest, though.

1994

12 April

1000. Plenty of stores left here. Also, we flushed a bird from a low, new hole in the traditional ~~gran~~ nest tree just above the road - a good ladder hole.

1630. Peeped the hole: 2 eggs (bird in hole again also).

13 April

1130. Opened the hole: 3 eggs. Marked 1-3 and measured:

① 24.1 x 18.7

② 23.9 x 18.9

③ 23.7 x 19.2

14 April

830. Checked the hole prior ~~to~~ to Jeremy's watch: still 3 eggs (checked - still marked 1-3).

Pres. laid <sup>late on</sup> 14 April or <sup>on</sup> 15 April

18 April

1640. Checked hole: 4 eggs. ④ 23.3 x 18.5

18 May

1200. Banded the babies (all 4 + 1 transplant).

8 June

Bird in a hole up at CV2a - checked it at 1400 when at least one fledgling flushed. It was empty, not ready for a re-nest. The question is - was this a CV2A nest or just the CV2 birds hanging out in holes, as fledglings are wont to do? We'll assume the latter...

25 July

930. Came to band the kids (they eventually did have a 2<sup>nd</sup> nest in the hole I checked on 8 June) but found only 1 fairly-recently dead baby. Measurements: Culmen: 20.5

WL: 64 <sup>6th</sup> <sup>38</sup> Sheath: 25 Tail: 24 Sheath: 12 Tail spots: Yes

Not at all clear why he died - he doesn't even look particularly emaciated. There are plenty of stores left.





1995  
1996

Walter D Koenig

Melanerpes formicivorus

CV2

HNHR

12 April

1600. A modest power struggle going on here! About 10 birds or so and a lot of activity.

① ♂<sub>DC/M</sub> #2231

② ♀<sub>Yel/LB</sub> #2107

③ ♂<sub>DC/M</sub> #2418  
Red/Red

④ ♀<sub>Yel/Yel</sub> #2416

⑤ ♀<sub>M/MLV</sub> #2420

⑥ ♂<sub>M/Red</sub> #1372.

Let me revise my estimate to 15 birds!

1620 Well, I have to go. But with ♂1372 here, this presumably is over a ♀ vacancy - but with 3 ♀♀ helpers, presumably filling the vacancy won't be easy!

This is actually quite a good show! Hope it lasts through next week!

13 April

1300. Finally made it back here to set nets (it rained this morning) and it's all quiet! Maybe it's over already? By the way, there are lots of acorns still here.

10 April

No one in any holes, but some stones remaining.

25 June

1545. 2 kids; 1 weighed 24 g  $\approx$  6 d (EHD = 19 June)

8 July

1730. Banded and bled the 2 kids.

15 July

1330. Transplanted the 2 ovarian kids here; at least one of the other 2 still fine.

12 August

3 dead kids in the nest - ~~but see~~ #2710, 2711, & 2712. Only j2709 potentially made it.



1000 1000 1000 1000 1000 1000 1000 1000 1000 1000



1000 1000 1000 1000 1000 1000 1000 1000 1000 1000

1997  
1998

Walter D Koenig

Melanerpes formicivorus

1

CV2

HNHR

30 March

1330. Bird in new hole, traditional (non-granary) tree.

4 April

1100. Opened the hole (at least the one I think they're interested in); empty. But in good shape.

9 April

1100. Lots of stores, still, but no one in any holes.

1998

30 April

845. Bird in '97 nest hole. Lots of stores, of course.

11 May

1200. Checked hole: 6 babies, 2-3 days old, + 1 unhatched egg, which measured  $25.6 \times 20.1$ . Band ~29 May.

29 May

1400. Banded the 6 kids, including, yes it's true - **BIRD #3000!!** A landmark indeed.

20 April

1130. Lots of stores.

20 May

1900. Opened <sup>new</sup> hole; 7 eggs, incubated. (I think I only peeped 5 yesterday, but I must have missed the other 2, since the eggs definitely were not fresh.)

Opening the hole was a challenge, since the limb twisted and ~~fell~~ broke in the process. I was eventually able to cut off the limb and nail the hole back together. I think it will be OK for now at least.

Measured 4 eggs: ①  $25.5 \times 20.2$  ②  $24.6 \times 18.7$   
③  $24.3 \times 18.9$  ④  $24.5 \times 19.3$

24 June

1st nest failed - Deb found the nest today in a new hole in the same tree (#296 now). 5 babies ~13 do!

(Bled  
the  
kids)

One, unfortunately, got nailed by the screw when opening the hole, leaving 4. All looked good + healthy!

Plenty of store still here, of course.



1993  
1994

Walter D Koenig

Melanerpes formicivorus

OK Corral

HNH

19 June

1650. Several birds flushed from different trees, several with potential nest holes. A few stores do remain here.

10 July

930 Banded & bled the 3 babies here (#2331-2553).  
A few acorns still spread here.

1994

12 April

945. Plenty of stores left; noone in any holes.

13 April

830. Watching with Joey with hopes (ultimately) of mate-guarding. Several birds here.

915. Moving to side of hill across from granary to get closer.

940. ♂ <sup>Blk-Yel/M</sup> LB-Yel/Yel- #2332.

945. Joey got a reasonable look at ♀ <sup>Or? Ret-</sup> M/(N) #2136.

1010. 2<sup>nd</sup> ♀: ♀ <sup>Da-Ret</sup> M/Ret #2333 here briefly.

1040. Birds all disappeared down the hill somewhere toward CV2.

1100. ♀ 2333 back. Now ♀ 2136 also.

1105. No good evidence of > 3 birds here so far.

12 May

1000. Stores still present, but noone in any holes.

23 May

1110. Watched 3 birds from a distance here for some time; they gave no real sign that they have a nest anywhere.

28 May

Katy reports having seen one of the breeder ♂♂ here!

25 July

Checked holes - still zilch. But there are stores left.



1995  
1996

Walter D Koenig

Melanerpes formicivorus

1

OK Corral

HNHR

18 May

1415. After seeing a bird in a new hole here a couple of days ago I came over and opened it, finding zilch. It is in good shape, though.

There are stores here, by the way.

28 June

1630. ♀ in a hole! Not an easy one to get to, though. Given that there seem to be no stores left, and the fact that I didn't hear anything when she left, I think we should wait a bit before climbing up here (it's in the main granary tree, not the "usual" nest tree next door).

10 July

Bird in same hole! May be time to go see what's up...

10 April

<sup>1996</sup>  
Came by & checked holes: zilch, but birds here at least. No stores here either.

December

Main tree cut down by Oak Ridge Wood cutters!!

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and the role of the accounting department in ensuring the integrity of the financial statements.

2. The second part of the document outlines the various methods used to collect and analyze data, including surveys, interviews, and focus groups.

3. The third part of the document describes the results of the research, highlighting the key findings and the implications for practice.

4. The fourth part of the document discusses the limitations of the study and suggests areas for future research.

5. The fifth part of the document provides a conclusion and summarizes the main points of the research.

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1997  
1998

Yellow-bellied Sapsucker

Yellow-bellied Sapsucker

Yellow-bellied Sapsucker

1997  
1130. Sapsucker banded the 3 kits; here 1200. and 1210. There are still stores here even though they have a granary not cut down last winter.

1998

30 April 850. Bird in hole. Stores here also.  
11 May 1145. 4 babies, 0-1 day old, + 1 runt egg! Band ~ 30 May. In hole marked #76.

29 May Banded the 3 kits; still stores here.

1999

10 April No stores, best we can tell.



1993  
1994  
1995  
1996

Walter D Koenig

Melanerpes formicivorus

UPHF

HNHR

1 April

Birds are back here (where do they go all winter?), but no stores in the area.

16 June

940. No sign of anything.

3 June

1994

There are stores in the tree here - presumably MPHFs???

23 May

1995

Again, there are stores in the tree here, but no sign of a group or of a nest (I checked everywhere).

11 April

1996

1410. 1 bird flushed from here - as UPHF bird perhaps?  
No stores here, unsurprisingly.

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1993

Walter D Koenig

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Melanerpes formicivorusMPHFHNHR1 April

Lots of stores still here; birds (roosting?) in at least 3 holes at 1630.

7 April

MTS reported 2 birds in the good nest hole yesterday, so I came and set things up this morning in hopes of an egg-tossing picture.

645. Hole empty. No birds hanging around, here or in the other nearby holes.

730. No apparent interest in holes, at least this morning.

9 April

650. Here again. A bird in the vicinity, but hole is still empty. Watching.

715. 3 birds preening in the LPHF granary appear to be from here: ① ♂ DB Wh-Mv #1614; ② ♀ Red-Wh/DB #1533. ③ ♂ M/ #1962. 4th bird here also: ④ ♂ Wh-Dk/Yellow #1613.

723. Bird just flew to trees across the road!

730. Birds are here, but showing no obvious interest in the holes yet. What's up with LPHF? No sign of them. All in all, things are sort of confusing here.

11 April

645. Trying here again.

700. ? m/Red-DBlue ... ? in granary eating dog food...!

② ♂ ~~Red-DBlue~~ Y-Dk/Ycl #1613. ③ ♀ M/Red #1533. 2nd ♀ here too.

712. 2nd ♀ just displaced (chased?) by one of the ♂♂...?

715. Still not sure what's going on here (is ♀1531 still here even?) but they still are not interested in holes, best I can tell.

21 April

700. Wasn't able to get back here until today, when it was too late: 4 normal, fresh eggs in the hole, which I numbered 1-4.

18 June

955. Bird in upper (unopened?) hole in traditional tree. 2nd nest.

1115. Hole checked: 5 eggs, incubated (all normal).

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1993  
1994  
1995

Walter D. Koenig

2

Melanerpes formicivorus

MPHF

HNHC

13 July

1500. Banded & bled the 4 babies. Plenty of stores remaining.

3 June

1994  
1045. There had (is?) a finch effect here (no breeder ♂) but they do have a nest: 5 babies + 1 unhatched egg (a runt!)  
① Or (22.7) ② LB (19.8) ③ DB (21.1) ④ LP (14.9) ⑤ NOBA (9.8) <sup>runt!</sup> egg: 18.6 x 15.2  
Plenty of stores.

17 April

1995  
1600. Went to set an ambush at the normal hole, but there was a bird in it - and 2 fresh eggs (marked). A nest!

19 April

930. Here with the NHK people (Shozo, Nao, Haruko). Still 3 eggs (Joey marked the 3<sup>rd</sup> yesterday).

24 April

1130. Bird in hole - same 3 eggs, incubated.

25 April

1200. The Japanese NHK <sup>people</sup> reported a power struggle here this morning and filmed for 2 hrs. I finally came late, by which time there was essentially zero activity (!) I checked the nest hole, though, where there were still 3 eggs (not particularly warm). What happened here? Was it a real power struggle (meaning a vacancy here?) or just some passing band of trouble makers?

23 May

1600. Banded & bled the 2 kids here. Plenty of stores remaining.

29 May

945. The NHK people reported dead nestlings here, so I opened it up to find 1 dead nestling, plus ♂ 16/4 - the latter decapitated!! Apparently a case of nocturnal predation! I took the bands off the 1 kid; I suppose the other may have escaped (or fledged) but I rather doubt it!

Bands removed from lead nestling  
5/29/95

{ Red-Mauve  
Mauve-White  
Red



1995  
1996

Walter D Koenig

3

Melanerpes formicivorus

MPHF

HNHR

17 June

1000. Lots of stores but no sign of a re-nest here.

11 April

1450. No stores left here!

23 May

1515. 3 eggs, measured. (See Jerry's notes).

26 September

730. Came by to show this area to Carol & Geoff, only to see a kid (old?) looking out of the hole! I blocked it up and went back for supplies, eventually banding 1 kid only, old enough such that others may have fledged already!

8 October

2000. Finally ambushed ~~the~~ an old MPHF hole and got ♂2076 - a 1992 MPHF nestling who's not been seen since January 1995! There's clearly work to be done here!

15 October

530. Ambushed the traditional hole in the MPHF tree (same one where the baby was on 26 Sept.) and caught 2 adults, ♂1962 (who we knew was here) and ♀2348, who we didn't. In fact, we don't really have any idea what she's doing here. Is she the mother of the nest? What about ♀2509? What is going on here?

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1997  
1998  
1999

Walter D Koenig

Melanerpes formicivorus

MPHF

HNHR

19 February 2100. Ambushed the traditional nest hole here, nabbing all 3 breeders but not the NOBA helper. Bummer.

Tree is positively packed with acorns here.

1940. Bird in the traditional hole. 2 eggs (1).

Plenty of stores left here

24 July

1500. Banded & bled the 2 kids.

1998

30 April

940. Noone in any holes, but stores remaining here.

1999

14 January 2100. Finally got a bird - a 2Y ♀ (NOBA) in the (old) nest hole in the main granary. Presumably she's from a missed 2<sup>nd</sup> nest last summer...?

Lots of stores here, by the way.

20 April

Plenty of stores, both here and in the MPHF tree. (Which is presumably MPHF, unless there are 2 groups here again)

26 May

1445. Opened the (new) hole, in a dead limb in a new Valley Oak facing the road. 5 eggs, incubated. ① 24.9 x 20.0 ② 26.2 x 20.4.



1993  
1994

Walter D Koenig

## Melanerpes formicivorus

LPHF

HNHR

9 April

MPHF birds here in the granary (which has no acorns). What's going on? No chasing or anything; indeed, there's no sign of the LPHF birds at all.

9 June

130. Birds (inc. 7 or 10? #1863) are in the ravine next to the road, interested (but not obviously using) a hole in a large oak tree. Holes they are working on?

Meanwhile, in the vicinity of their last year's hole are birds who keep flying up to MPHF and presumably belong there.

145. Also here: 2 birds. Birds going to hole regularly, but none has gone inside or fed or done anything to clarify why.

16 June

130. Bird in hole.

123. Hole poked: empty. But they are definitely interested.

120. 1st hole: empty. 2nd hole: empty. Perhaps the greater is a hole? That would explain it.

6 July

1630. Bird in the hole again. Also, Veronica claims to have seen the ♂ a few days ago.

7 July

830. Hole checked. Empty, best I could tell. Certainly no babies in it, at any rate.

1994

18 April

1620. Bird in hole by road (Live Oak).

19 April

1015. Opened hole: 3 fresh eggs. ① 23.6 x 20.0 ② 23.9 x 19.4 ③ 24.0 x 19.8.

30 April

1630. Babies hatching! 2 recently hatched, egg #2 pipping.

23 May

900. Banded & bled the 2 babies here. There are some holes up



1994  
1995

Walter D Koenig

2

Melanerpes formicivorus

LPHF

HNHF

(23 May) near the nest hole, but I saw no remaining stores. This doesn't really mean that they are out, but they are probably fairly low. (Of course, I don't really know about anything beyond these 200's holes that are here.)

1995 →

24 May

1045. Watched for ~10 minutes, not seeing anything except a couple of birds on the hill toward CV (but across the road). Could have been these birds. Certainly no sign of anything going on here.

No stored acorns by the road, anyway. I saw a bird yesterday in the old granary, though, so maybe there's something there? No sign of birds hanging out there today, though.

6 June

1100. Bird in last year's nest hole! Checked it: 4 eggs, a couple days incubated. Measured one:  $24.0 \times 18.3$

17 June

930. Checked nest: 3 kids, ~4 do. (Band on ~~4~~ 7/1).

No sign of 4th egg.

26 June

2015. Watched roosting tonight expecting ♂2075 or ♂2445, but instead got ♂ ~~2075~~ M/WN-LA #1962, a ~~3~~ MPHF ♂. Presumably all 3 are here? [NO]

Field list  
mixed,  
up  
1962

Critical point: ♂1962 roosted in nest!

3 July

1130. Banded & bled the 3 kids here.

(1)

(2)

(3)



1997

1998

1999

Walter D Koenig

1

Melanerpes formicivorusStrombergHNHR4 April

1100. Bird in a hole! Opened it: empty, but in good shape.

15 April1330. 4 eggs.  $\odot 25.4 \times 18.3$ 24 April

1330. Just hatching; set the ambusher up.

10 July

915. I looked around and only found 3 limbs in various places with storage holes, but they all still had acorns in them!

Banded and bled the 2 kids in the 2<sup>nd</sup> nest.199828 April

1330. Bird in (old) nest hole! 4 eggs, fairly fresh. Stores remaining? Yes

11 May1315. 3 babies, 4-5 days old, + 1 unhatched egg:  $26.0 \times 18.6$ . Band ~27 May.29 May

1300. Banded the 3 babies (+ 1 transplant from Cavity). There are even some stores left in the other sycamore.

199919 April

Stores: Yes.

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1993  
1994

Walter D. Koenig

Melanerpes formicivorus

Westgate

HNHR

2 February

1630. Counted stores: 2290. Tree is quite full and hard to count. Birds are definitely doing well.

8 April

Stores still remaining here.

13 May

1300. Banded & bled the 6 babies here (2 from the aviary).  
Stores still present.

1994

20 January

1510. Counted stores: 2610. Also, Jen & Wendy claim that this group has taken over the Gate granary, which has 575 acorns.

Tree is still very difficult to count.

10 May

1700. Bird in new hole high in Sycamore (previously opened by Stanback): 8 eggs, all normal and pretty fresh. I numbered them but didn't measure them.

Plenty of stores here still.

30 May

1400. 6 healthy babies here, even though there's apparently no breeder ♂ (who was DOR about the time the eggs were laid)! ① LG (53.3) ② Yel (56.3) ③ LB (55.0) ④ Or (51.2) ⑤ DB (53.3) ⑥ NOBA (48.2). This is ~ day 13, which means banding should be ~ 7 June and LED was ~ 6 May.

31 May

1000. Also 2 NOBAs, which I'm now trying to catch.

1030. ♀ 1415, ♀ 1473 feeding. ③ ♂ 2028 also (♂ LG-DB/LG)

1100. Got one of the ♂♂!

1135. Back to try for #2 for a bit.

1200. Got ♂ #2!

The heavy wear on the feathers of both birds is consistent with them being 2Y birds, but whether they are the (presumed) helpers we missed from the (apparent) second nest last year or new,



1994  
1995

Walter D Koenig

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Melanerpes formicivorus

Westgate

HNHR

(31 May)

replacement breeders (the former breeder male got nailed by a car about the time eggs were laid) is unknown.

2 June

1330. Katy reports that there's still a ♀ NOBA here, so I'm back to go after her.

1615. Not much happening and the light sucks. Try again in the morning!

3 June

600. Trying again.

745. Finally got her! Now ♀ 2489.

7 June

1100. Banded and bled the 6 kids.

25 July

Acorn stores still remaining.

1995

17 April

1020. Pete reports <sup>a</sup>bird in the lower hole of the the dead limb. We came out here and saw lots of activity - possibly egg-tossing is going on? In any case, the hole (not easily gotten to anymore) is empty.

24 April

1100. Birds have been in the same hole several times so I checked it again - but it's still empty!

8 May

Three of the helper ♀♀ at the power struggle at 1500.

24 May

1600. Opened the lower hole in the dead limb where I've seen a bird 2-4 times in the past several days - nice but empty. I also went ahead and knocked the back cutouts out of the upper (actually middle) hole, as the limb is too rotten to warrant risking having them use it anymore. Let them use this lower hole if they insist on this limb!

29 May

930. Bird in low hole in dead limb again.

31 May

1500. Checked hole: empty!!! Egg-tossing, maybe?



1995  
1996

Walter D Koenig

3

Melanerpes formicivorus

Westgate

HNHR

7 June

1600. Finally! 7 fresh eggs. Measured 1: 25.2 x 18.7 mm.

16 June

2015. Best I could tell, noone roosted in the nest this evening (!) What does this mean?

17 June

900. Checked nest: now 6 eggs, not hatched yet. But a bird was in the hole & the eggs were warm.

20 June

2005. Unless someone is sneaking into the hole very late, noone roosted in the nest again tonight!

(A ♀ was in the hole when I arrived. She eventually left and noone came after her.) I think they have a problem here - presumably related to the fact that there is apparently no breeder ♂ here. I wonder if the eggs are even fertile? It seemed as though they were developing...

26 June

1600. Hole empty. I'm not surprised, given that noone roosted in the hole!

1996

4 January

1530. Counted stores: 885, and probably an underestimate as usual. By far the group in the best shape out here along the road. Also, 3 birds in holes while I was out here.

17 April

Out of acorns here!

27 April

1015. Bird in hole. (Low hole in dead center limb.)

7 May

1330. Checked the hole: nada. Also cleared out a Starling nest from the old high nest hole in the main trunk.

5 June

1315. Finally waited long enough: 1 baby, ~10 do! This means BP ELED ~13 May! Cleared out a Starling nest in the high hole again.





Melanerpes formicivorusWestgate

(5 June)

2000. At roosting, ♂ BIK / BIK-Or #2488 roosted <sup>HNHR</sup> in the nest, possibly (but unlikely) with a ♀. No other ♂ came, although it's possible (but again unlikely) that one was in the hole the whole time behind the ♀ and was never seen.

9 June

2001. Bright at roosting, the highly likely ♂ BIK #2488 and ♂ BIK-Or #2128 roosted in the nest. The ♀ was there with either a 2 times longer; the only possible ♂ BIK is that ♀ BIK was in the hole as well for part of the time. (In fact, it was ♂ BIK #2128 & ♂ BIK-Or #2128.)

12 June

In contrast, foraging - roosting roosted in the nest at least by 2000. Finally, I'll say the identity of the one remaining set up there is dubious - I better check with tomorrow.

13 June

1000. Could not see a hole near & view covered by the hole. I know that the nest hole is OK.

27 September

900. Climbed up to the likely nest hole just to be sure: zippo.



1997  
1998  
1999

Walter D Koenig

Melanerpes formicivorus

Westgate

ANHR

4 April

1515. Bird in my favorite hole. 7 eggs, fresh (all normal). Measured 2: ①  $25.1 \times 19.0$  ②  $25.8 \times 18.9$ .

15 April

1400. 7 babies! Didn't measure them, but I guess ~4 days old. (Band ~ 2 May).

5 May

1600. Banded & bled the 6 babies.

10 June

930. ♀ in the new hole, lower in the same dead limb.

12 June

1300. Jammed the new hole. 4 eggs, probably  
Measured ①  $24.6 \times 19.0$  ②  $24.0 \times 18.5$

Also putting out the old food container. It's so  
wet so I never have to climb up on that tree again!

8 July

1130. Banded and bled the 2 babies here (2918-2919).  
Lots of acorns left.

1998

28 April

930. Bird in a new hole in the main limb, but even  
higher than the old (Starling) hole! Managed to get  
up there: 1 <sup>fresh</sup> egg, which I collected ( $25.0 \times 18.5$ ).  
Lots of stores here.

19 May

1400. Went back up there: 3 hatchlings + 1 egg.  
Band ~ 4 June.

1999

19 April

Stores: Yes. (Lots).

11 July

Stores: Yes.

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1993  
1994

Walter D Koenig

Melanerpes formicivorus

Gate

HNHR

2 February 1615. Counted stores: 677. Using most every nook & cranny here, including the big remaining styrofoam block.

15 June Stores remain same!

1994

20 January 1500. Counted stores: 575. Note, however, that Jennifer & Wendy believe this tree to have been taken over by Westgate..

19 April 1615. Bird in last year's Pipeline hole - presumably these guys...

20 April 1015. Opened the hole (it's not the same as last year's Pipeline nest). It's still being built and as yet has nothing in it.

10 May 1530. Opened the new nest - a new hole high in the Gate tree: 4 babies, ~ 7 do. Wts: Black-28.2g; LB-30.8g; NOBA-15.0g; #2401:33.1gm. The bad news is that I sawed off the 4<sup>th</sup> babies' wing in opening the hole - bummer. Stores still up in this tree also.

25 July 900. Banded the 3 kids from the 2<sup>nd</sup> nest here. 2 of 3 were quite runty, but will probably make it none the less. There are still stored acorns here.



1995  
1996

Walter D Koenig

Melanerpes formicivorus

Gale

HNHR

3 May

115. Bird in old hole in Live Oak. opened it: 3 eggs, possibly incubated 1-2 days. Measured one:  $25.8 \times 18.3$  mm.

12 May

1400. Hole empty! Nest failed!

18 May

1200. Checked new hole (actually, one of the old holes, used mostly by Starlings) in the Sycamore - 6 eggs, fairly fresh.

26 May

1630. Now 8 eggs! Measured one:  $27.4 \times 20.1$  mm. Also cleaned out a starling nest in the old high hole.

7 June

1530. Checked hole: 3 kids, 1 bigger + 2 smaller, about 8 days old as expected.

9 June

1130. To be on the safe side, I bled the 3 kids (#2626-2628).

13 June

1950. Watched roosting here tonight, seeing ♀1571, ♀2251, and ♂2028, who roosted by himself in the nest.

1996

4 January

1520. Counted stores: 150. Hanging in there, if only barely, like the rest of the road groups!

30 April

1300. Bird in the high hole in the Sycamore.

6 May

1130. Bird in hole again. Went up: 4 eggs, incubated.

Size are: ♂  $27.1 \times 20.1$ ; ♀  $27.2 \times 20.4$ ; ♂  $25.7 \times 19.1$ ; ♀  $26.0 \times 19.4$ .

14 May

1030. All 4 eggs have hatched; 1 chick is runty but otherwise they look fine and ~3-4 days old.

3 June

♂2028 roosted in the nest tonight, by himself.

4 June

And again, ♂2028 roosted in the nest tonight.

12 August

930. 2 LOUD KIDS! In high (spring) hole! Banded & bled. About 17 do, giving an EDED of about 15 July!

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1996 Walter D Koenig

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Melanerpes formicivorus

Gate

HNHR

(12 August) ♀ Well, isn't this bizarre! Too early to be a fall nest, really!

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1997  
1998  
1999

Walter D Koenig

Melanerpes formicivorus

Gatz

HNHR

24 March 1600. Opened a new hole 'relatively' low in the limb with last year's hole: 6 eggs, ~~just~~ early incubation. (no runts)

25 March 1300. Still 6 eggs. Measured 2: ① 25.5 x 19.3 ② 26.6 x 19.3

4 April 1530. 5 babies, ~4 do (no eggs). 3 babies big & healthy, 1 intermediate, and 1 almost a goner. I took the last for DNA, leaving 4 in the nest, only 3 of which may make it.

21 April 1630. Banded & bled the 3 kids.

1998

21 April 1300. Stores remaining here, along with 2 birds at the high hole in the sycamore.

23 April 1700. Nest in a new hole 2' below last year's! Two babies, ~14 days old. Band 30 April. Not so far behind last year after all!

30 April 1630. Banded and bled the 2 kids. No luck catching the unbanded bird, whoever he is.

14 May 1415. Bird in hole. Fledgling? New (2<sup>nd</sup>) nest?

21 May 1530. Checked the '97 hole, which is damp but otherwise fine. Also, stole one of the 3 eggs in the 2<sup>nd</sup> nest for hormones. Measurements: 25.2 x 20.0

1999

19 April Stores: Yes.

30 April 1100. Opened the new hole, but it's empty!

30 May 1400. 5 eggs! (Definitely, 2 ♀♀ - there were 3 yesterday). Collected one for hormones; 4 left in the nest.

6 July Stores: Yes.



1993 Walter D Koenig

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Melanerpes formicivorus

Warp 5

HNHR

2 February

Checked up here this afternoon. I'd already noted that the Black Oak roost tree had fallen, but in fact, just about everything has gone here within the past 6 months or so: the snag granary has fallen, as has most of the only other tree nearby (a Valley Oak) where I'd ever known these birds to nest or store in. All in all, there's virtually nothing left here: no storage hole, roost holes, or even much in the way of potential trees in which to start over again. My guess is that we won't be ~~seeing~~ seeing anyone here for some time to come!



1993  
1994  
1996

Walter D Koenig

Melanerpes formicivorus

Pipeline

HNHR

2 February

1540. Checked stores here: 1766! Definitely birds here - the granary is packed with acorns.

8 June

1000. Still plenty of stores here. There must be a nest somewhere. 1105. Found it! It's high over the road in a Vally Oak towards the gate. Birds were still!

1530. Bandit still in the 3 birds.

1994

20 January

1530. As claimed by Jen & Wendy, the granary is empty here. Group <sup>has</sup> ~~is~~ apparently abandoned. Why, I wonder?

There seem to be plenty of acorns in the near vicinity.

21 January

1100. Just noticed one problem here: The large artificial storage piece, along with the limb supporting it, has fallen.

The group has certainly lost a major proportion of its facilities, and could be down to  $\leq 500$  holes.

Perhaps I'll try to stick these limbs (or what's left of them) back up somewhere when I get the chance.

14 April

Still looks pretty deserted. Major sections of the granary are still on the ground.

1996

4 January

1515. Nothing here, unsurprisingly.





1997  
1998  
1999

Walter D Koenig

Melanerpes formicivorus

Pipeline

HNHR

15 March

600. Finally caught the pair of birds here (♀2462 + ♂NOBA)

Also, on 13 March I finally put the large granary section that had fallen (in 1994? 1995?) back up in the tree.

20 April

1515. Bird in a new hole in the sycamore over by the creek!

1998

21 April

Stores here, but none in any holes.

28 April

830. 4 fresh eggs. Measured 1:  $25.7 \times 19.3$ .

14 May

1615. 3 babies, 4 days old, + 1 unhatched egg, which measures  $26.2 \times 19.3$  mm. Band ~ 31 May.

1999

19 April

Stores: Yes.

27 May

1000. Banded & bled the 4 kits here. Still have some stores.

16 July

Stores: Yes.



1993  
1994  
1995

Walter D Koenig

Melanerpes formicivorus

Wolfpack

HNHR

2 February 1550. Counted stores: 192. Something, at least, but I still have no lead on any major storage area here.

1994

20 January 1540. Counted stores: 92. Really, there's got to be something more here, but where?

14 April 1100. There are still a few acorns in the granary. Plus, a bird flushed when I came by. There certainly is a group here.

19 April 1545. 2 birds in hole at Pipeline/Wolfpack. Mark checked:  
6 eggs! Measured them: <sup>Translucent</sup> ① 25.5 x 19.6 <sup>Translucent</sup> ② 26.0 x 20.1  
<sup>Translucent</sup> ③ 25.6 x 19.4 <sup>Opaque</sup> ④ 24.7 x 18.5 <sup>Opaque</sup> ⑤ 24.9 x 18.0 <sup>A runt!</sup> ⑥ 18.4 x 14.7  
Time to find out who's here! ↴  
Eggs incubated. Apparently 2 ♀♀ here.

1995

16 May 1630. Came by here and saw ~ 2 stored acorns and no birds. Is there even still a group here? No sign of a nest as yet.

12 June 1600. Watched for an hour here and saw very little. On 2 ~~occ~~ occasions, a bird flew by, one stopping to flycatch for a few minutes. So there may be birds here. But I sure saw no sign of a nest or really ~~any~~ any sure sign that a group is living here.

20 June Ambushed the hole in the Sycamore over ~~A~~ toward Pipeline, netting ♂2408.



1996

Walter J. Keesing

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## Melanerpes formicivorus

Wofford

HVHR

4 January

1510. Checked stores here: 89, all in the 10 by the river. Given that L has 4200, this isn't really out at all - at least there are birds here!

23 May

13 June

1945. No sign of anything here this evening.

1946. No sign of anything here this evening.

1947. No sign of anything here this evening.

1948. No sign of anything here this evening.

1949. No sign of anything here this evening.

1950. No sign of anything here this evening.

1951. No sign of anything here this evening.

1952. No sign of anything here this evening.

1953. No sign of anything here this evening.

1954. No sign of anything here this evening.

1955. No sign of anything here this evening.

1956. No sign of anything here this evening.

1957. No sign of anything here this evening.

1958. No sign of anything here this evening.

1959. No sign of anything here this evening.

1960. No sign of anything here this evening.

1961. No sign of anything here this evening.

1962. No sign of anything here this evening.

1963. No sign of anything here this evening.

1964. No sign of anything here this evening.

1965. No sign of anything here this evening.

1966. No sign of anything here this evening.



1997  
1999

Walter D Koenig

Melanerpes formicivorus

Wolfpack-

HINKER

30 December

700. Well, they weren't roosting in the hole we gave them. Instead, they were down by the creek in the small sycamore in the forest toward Pipeline. I set an ambush last night; unfortunately, ~~the~~ the string broke, but I came back, got the pole, and succeeded in blocking the hole after missing only one bird. Interestingly, there were 3 others still in the hole - 2 ♂♂ and 1 ♀, all NOBAs! They are now #2963-2965.

So note: 4 birds here - probably 3 ♂♂ and 1 ♀ but now at least we can find out for sure.

1999

19 April

There are a few stores in the big VO ~~corner~~ the road.

27 May

Still stores left. Birds seem to be hanging out in the big VO.

6 July

Stores: No.





1993  
1994

Walter D Koenig

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Melanerpes formicivorus

Road 1

HNHR

1 February

1600. Counted stores: Sycamore: 2085  
Valley Oak: 950 } 3625  
Dead, spindly, tall }  
oak across creek: 590 (near '92 nest hole)

Even this may be an underestimate: the trees are loaded here, especially the Sycamore, which is so full it's hard to count. Note also that the tall spindly tree across the creek is emerging as a substantial facility; I assume it belongs to Road 1 since it's right near their nest, but there's no independent confirmation of this as yet. Someday, at least, it certainly could (and will!) support a separate group (like Songo).

~~2 February Skip watched the spindly granary this morning and reports~~

8 April

Stores still remaining here - plenty of them.

1994

21 January

1020. Counted stores: Sycamore: 1580  
Valley Oak: 675 } 3351  
spindly tree }  
across creek: 1096

This group also is purported to be storing at Finch, where there are 339 acorns, although my guess is that they have perhaps "budded" off to it instead. In any case, they are doing well, though not fabulously so.

1 March

Mark pointed out to me that the Sycamore granary has fallen! (not entirely, but the storage holes are a total loss). We saved a few limbs and <sup>leaned</sup> ~~put~~ one big limb on its side next to the tree, but basically, they have permanently lost ~2000+ holes!

14 April

1015. Watching from the side of PO Hill.



1994  
1995  
1996

Walter D Koenig

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Melanerpes formicivorus

Road 1

HNHR

(14 April)

1050. No good sign of anything, although there seemed to be several potentially suspicious trips over to Finch, possibly beyond the Sycamore granary somewhere.

Still stores in the main tree.

18 April

1615. Bird in hole (found by Katy).

19 April

1600. Mark checked hole (1/2 way up in small sycamore over on far side of creek by Finch's area): 3 eggs, quite fresh.

① 24.8 x 19.5    ② 24.3 x 19.7    ③ 24.7 x 19.5.

1995

31 May

1330. Banded & bled the 4 kits here.

26 June

1530. Noone in any holes. Also, stores gone, or nearly so. There may be a very few left in the main granary, but most look like shells.

1996

4 January

1445. Counted stores: "Main" VO: 75

Spindly VO across creek: 55

} 130.

Not much, to be sure, but enough that I'm confident there are a few birds hanging on here!



1997  
1998  
1999

Walter D Koenig

Melanerpes formicivorus

Road 1

HNHR

6 April

1445. Checked the nest: 5 eggs, The 2 Joey marked and 3 new ones. I think he checked it on 4 April, so 2 ♀♀ are indeed breeding (mother & daughter incestuously with the sons/brothers!?)

20 April

1500. Checked the nest: 6 babies. One of the largest weighed 16gm, putting them at ~ 4 d.o. (Band on 7 May).

8 May

1300. Banded & bled the 6 kids.

30 May

1415. One of the kids (~~DB/DB~~ <sup>(right leg)</sup>) didn't make it - he was mummified, ~~in~~ partially blocking the entrance to the hole. (Bands remaining were: ~~DB/DB~~ <sup>DB/DB-O</sup> -)

2 June

1530. 5 eggs, incubated, in the lowest hole in the tiny sycamore snag. Measurements: ① 23.5 x 17.8 ② 23.2 x 18.7 ③ 23.1 x 18.9.

1998

21 April

1320. Lots of stores, none in any holes. Note: nest of the old nest tree (two small sycamore snag) has disintegrated; only the low hole used late last year remains.

1999

19 April

Stores: Yes.

6 July

Stores: Yes.

1600. 1 Annabanded baby (!) here, checking out a tree VO by the creek. Does it belong here? Did we miss the nest? No one else with it so it's hard to tell if it belongs here or not.



1993  
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Walter D. Koenig

Melanerpes formicivorus

Road Warrior

HNHR

1 February

No acorns stored here; presumably, still no group here.

21 January

1994

1030. Still no <sup>stored</sup> acorns or sign of life here. Maybe the granary is too overgrown to be particularly desirable...?

26 June

1995

Nothing up here, best I can tell.

4 January

1996

140. Granary has fallen! Another (potential) group bites the dust.





1993  
1994

Walter D Koenig

Melanerpes formicivorus

Finch

HNHR

1 February

1540. Counted stores: Sycamore: 425 } 605.  
Valley Oak: 180 }

Neither tree is particularly full, but then again neither could hold as many acorns as in the old days either (particularly the Valley Oak). Birds are here, though!

8 April

No stores appear to remain here. Are there birds at all?

1994

20 January

1600. Counted stores: Sycamore: 212 } 339.  
Valley Oak: 127 }

Wendy & Jen think this area has been taken over by R1; my guess is that they've "budded" and that in fact this is a viable group again, albeit one without a lot of stores.

14 April

1010. No stores left over here.



1993  
1994

Walter D Koenig

Melanerpes formicivorus

MacFlat

HNHR

1 February

1515. Checked the dead limbs here, finding 516 acorns stored! There would appear to be a group here, unless it's just the R3 birds storing here as well.

2 February

Skip watched here this morning and reports R3 birds (mostly juvs) hanging out here. So it's probably not a new group yet, at least.

8 April

At least a few acorns still stored in this area.

1994

21 January

1045. Hard to know what's up, since Jen & Wendy have failed to see anyone in this area (or at R3), but there are a goodly number of acorns stored: Plains area: 525 } 1085. Not bad.  
Burned LO: 560 }

I also heard birds up on the side of PO Hill beyond the burned LO.

1 March

The old, low nest hole just above the road has been lost within the past month.

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1993  
1994

Walter D Koenig

Melanerpes formicivorus

Road 3

HINHR

1 February

1500. Counted stores: Main Sycamore: 344 } 1004.  
Valley Oak: 660 }

This group lost a major limb from the sycamore recently, including at least 2 old nest holes and 500 stored acorns.

Thus, although they're in mediocre shape now, they were alright until this recent loss. Granary space is pretty full.

I propped a couple of the fallen pieces (~200 acorns) up against the sycamore in case they wish to reclaim the acorns.

8 April

At least a few stores remain here.

21 April

800. 2 birds here, 1 is ♂<sub>m</sub>, ? Watching for a bit.

810. ? <sup>Blue-Yel/Blue</sup> Yel/M #1633.

820. Not coming back? ~~in oak here~~.

830. Up in sycamore beyond nest tree: 3 birds, together, and a 4<sup>th</sup> who stayed after 3 flew off. 4 birds here.

1994

21 January

1050. Counted stores: ~~280~~ Syc: 280 } 700.  
Valley Oak: 420 }

Pretty weak. What's really odd is that one of our Golden Oaks overhanging the road has produced acorns such that there are a fair number along the side of the road! This would make it seem like they could (still!) store a lot more acorns if they wanted to...

Seriously, there are 100-200 large, beautiful-looking acorns just sitting here (on the side of the road). Amazing!

14 April

1000. Still stores, both here and in the Mac Flat tree (burned live oak). No one in any holes, however.

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1994

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1996

Walter D Koenig

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Melanerpes formicivorusRoad 3HNHR18 April

1600. Opened the high hole in the MacFlat Valley Oak, where Joey has seen birds the last couple days: 5 fresh eggs.  
 Marked 1-5: ① 23.0 x 19.0 ② 23.4 x 19.9 ③ 23.4 x 20.0  
 ④ 23.9 x 20.2 ⑤ 23.4 x 19.5.

199523 May

Joey & I checked the nest here - 4 kids, 1 on way out that we bled & returned.

More interestingly, baby (?) Pygmy Owls were apparently fledging from an unopened hole lower in the tree here!

5 June

Banded and bled the 3 kids here. As expected, the 4th didn't make it.

Best I can tell, there are no stores remaining here, even over in the burned-out MacFlat tree across the road!

19964 January

1430. Counted stores. R3 square: 150 { <sup>not much</sup> left of this thing!  
 R3 valley oak: 290 } 440.  
 MacFlat trees: 0

At MacFlat, both square snags in the flat area between the road & the creek have fallen. All that's left is the burned snag on the other side of the road, but it's empty.

Things have really gone downhill here; even though they don't have much, the only unused storage facility is the MacFlat tree with maybe 300 holes; Their total capacity here (including MacFlat) is probably about 900!

17 July

2100. After Joey saw 5 birds at the old (MacFlat)

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1996 Walter D Koenig

3

Melanerpes formicivorus

Road 3

HNHR

(17 July) nesthole last night, we ambushed this evening, nabbing 3 birds - 2 ♂♂ and a recently fledged JUV!!!

Bummer! So we missed a nest here. My goodness - it's not like we hadn't been checking out here or anything.

The ~~#~~ two ♂♂ were: ♂1633 and ♂2413.

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1997

1998

1999

Walter D Koenig

Melanerpes formicivorusRoad 3HNHR14 April

1120. Watched here for a couple of hours, not finding anything definitive. There would, however, appear to be 3 birds here. I found one new hole past the R3 turnaround, but otherwise zilch.

20 April

1505. ♀ in the low sycamore hole near the MacFlat tree! Could this be it?

3 July

<sup>stores</sup> Acorns remaining in the burned tree on the PO Hill side of the road near the old Live Oak nest tree.

199828 April

820. 6 babies 0-1 days old! (No eggs) In (low) sycamore hole. Band ~ 18 May.

There are a few stores remaining here, at any rate.

19 May

1500. Banded the 4 babies, #2975-2978.

199919 April

Stores in the MacFlat nest tree.

6 July

Stores: Yes. See Joey's notes about the missed nest here. That's was apparently in the high hole over toward Finch. I saw a kid in it about 2 weeks ago, but a night search yielded zilch. Today tree monitored and caught 4 fledglings!



1993  
1994

Walter D Koenig

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## Melanerpes formicivorus

School Hill

HNHR

25 January

1500. Counted stores: Main tree: 1845 } 1979  
2° tree: 134 }

Not especially full, but the trees are fairly well loaded.

20 April

1430. 2 birds flushed \* young babies calling from the hole in the upper enclosure tree.

21 April

1330. Brought Erik up for a watch and checked the hole, where there are 4 babies:

	wt.	wt.
White	52.0	24
LPink	52.0	23
Orange	55.7	25
La.	48.7	22.

They're <sup>~13</sup> ~~~18~~ <sup>to</sup> ~~to~~, which makes the ELED  $\approx$  29 March.

4 May

1330. Banded \* bled the 4 babies here (now ~ day 26).

830 May

1415. Made a quick pass at the holes here, but nothing obvious going on.

There are stores remaining, by the way.

4 July

830. Banded \* bled the 2 babies in the 2<sup>nd</sup> nest (tree 2 in enclosure). A few stores still remaining.

1994

21 January

1145. Counted stores: Main tree: 2250 } 2380.  
2° tree: 130 }

Doing quite well. Room for a tad more still (in the bark), but otherwise quite replete.

13 April

1545. 5 4-5-day-old babies in the Sch. Hill "C" hole! One smaller than the others, but all may make it.

1615. No one in any other holes - the above nest is certainly it.

3 May

1230. Banded the 4 babies. Acorns still remaining.

( 1 )

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1994

Walter D Koenig

2

Melanerpes formicivorusSchool HillHNHR

(3 May)

1930. Watched roosting tonight, but ended up a bit confused.

I thought I saw ♂ <sup>LG-LB/LG-LB</sup> or / (M...?) or something to that effect, but this doesn't match either of the breeders.♂1385  
roosted in  
nest, I think...My best guess is that it was ♂1385 and that I got the legs switched (depth perception can be quite poor that time of night) but I'd better try again to be sure. In any case, I thought it was him because I'm pretty sure I saw a single orange band somewhere. He roosted at 1928, and only I spent the night in the nest.5 May1945. Tonight Joey and I tried again, and were again not decisive. However, Joey thought that he saw a M band on the Lower Right - again not likely, while ~~I~~ I saw M on the left and essentially nothing on the Right. My best guess is again ♂1385 with legs a bit confused, but another shot wouldn't hurt.Again,  
♂1385 I  
think6 May

1945. Noone roosted in the nest tonight.

8 May1945. Tonight, finally, I got ♂1385 roosting in the nest for sure. (by himself).♂1385  
roosted in  
nest9 June. 1130. Noone in any of the known holes.7 July

1100. Plenty of stores. No sign of a nest, however.

2 August

Many reports NOBA juvs here. Piss me off.

3 August10 birds roosted in the hole in tree #4 tonight! + 1 in the 1<sup>st</sup> nest hole.4 August

1645. Set ambushes.

5 August600! Everyone - 14 birds total including 4 NOBA fledglings - was in the upper hole in tree #4! A record for 1 ambush!

By a long shot!

9 November

730. Ambushed at 3 holes this morning, partly





1994  
1995

Walter D Koenig

3

Melanerpes formicivorus

School Hill

(9 November) for the NHK people, who were hoping for a power struggle, and partly to get a ♀ NOBA seen here by Bill. In the end, we got 13 birds, including 2 juv. ♀ NOBAs!

1) New hole (unopened) in Tree #2: 2 birds, ♂ 1385 (the breeder, or at least one of them) and ♂ 2207.

2) The hole in Tree #4: 1 starling! Squeezed

3) The SHC hole: 11 birds, including ♀ 1903 (the breeder), ♂ 2137, ♂ 2208, ♀ 2210, ♀ 2330, ♂ 2381, ♀ 2555, ♀ 2556, ♂ 2557, and 2 NOBA ♀♀, both juvs(!), 2567 (pretty young, or at least delayed) and 2568.

This was quite a haul. Amazingly enough, it suggests that this group fledged an unprecedented 6 from the late summer nest that I missed - the 4 I caught in August and the 2 today. Most likely this was in the new hole I found and ambushed at this morning in Tree #2.

As for the power struggle, although we kept both breeders and the old helper ♀ 2210 until nearly ~~10~~ 1030, no power struggle activity at all was instigated.

1995

11 April

600. More ambushed here (hoping to get ♂ 1426) but only got 3 birds in the hole in Tree #4. (Note: there are 3 potential holes in tree #2).

24 April

New nest in Tree #1 - low limb outside of enclosure. Opened it: 3 babies, 3-4 do, + 1 egg (addled): 25.3 x 20.4 mm.



Melanerpes formicivorusSchool Hill

HNHR

6 May  
8 May

1330. Set up in the blind, trying to catch ♂1426 for blood.

At least 5 of the helper ♀♀ from here down at 1500 power struggle, where they appear to be winning.

1930. Watched roosting here; 1 ♂ roosted, but I wasn't certain which he was.

30 May

925. Watching from blind for breeder ♂♂. (Censusing)

Still stores here, by the way.

① ♂ Or/Ped-Or(N) #2208.

② ♂ Or/Or #1385.

Still need a better look at this ♂. R leg too easily mixed up w/ 2208.

③ ♂ DB/LG #2381.

④ ♂ B-W(N)/B-W(N) #2209.

⑤ ♂ LB/M #2137 with one of the kids over by the nest (kid is out). ⑥ ♀ Or-LB/LB-Or #2567 (unmistakable)

1115. Things are slow, but there are certainly birds here. So far only 1 ♂ of the breeder ♂♂, however.

31 May

950. In the blind again.

1020. ① ♂ LB/M #2137.

② ♀ M/Wh-R/DB #1903 (♂) ③ ? B-W(N) #2209.

④ ♂ Or/M #2208.

⑤ ♂ M/R-W #2381.

1115. Just saw ♂ Or/M #2208 and ♂ Or/Or simultaneously - later must be ♂ 1385.

1130. Leaving. Looks pretty much like 6 birds here.

13 June

1315. Noone in any holes. Plenty of stores left, though.

22 June

1530. ♂ in Blue Oak (old) hole at lower end of field!

23 June

1100. Checked the hole - nothing. Not even in real good shape.

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1996

Walters Pond

# Melanerpes formicivorus

School Hill

11/15

3 January

1345. Counted stores: Main tree: 1225 }  
2nd tree: 10 } 1235

Melanerpes to be sure, but not terrible. Note: a lot of these are Black Oak acorns, taken apparently from the few trees off in the canyon-toward SW!

19 April

1500. No birds in holes, but there are still stores here (again, mostly calycis acorns).

26 April

1600. Bird in last year's (1200) nest hole: 4 eggs, incubated.

2nd hole: 1 24.5 20.0 24.5 19.0 24.9 18.0 24.4 17.9.

29 April

1230. Still 4 eggs. Getting close.

2 May

800. Still 4 eggs!



1997 Walter D Koenig

Melanerpes formicivorus

School Hill

HNHR

7 May

800. Checked the new hole above the enclosure, even though there wasn't anyone in it: zilch.

12 May

1300. Bird in the hole at last!

1315. Well, it's still empty, but at least I think I can be fairly confident that they will nest here.

16 May

900. Still nothing! This is becoming worrisome....

22 May

1415. Well, we did miss the 1<sup>st</sup> nest - There are fledglings here. But at least I found the 2<sup>nd</sup> nest - it's in a new hole in Tree #2 facing into the enclosure. This is probably where the 1<sup>st</sup> nest was as well. There are now 3 eggs incubated: ① 25.2 x 20.0 ② 24.6 x 19.7 ③ 24.3 x 20.2

(egg #3 doesn't appear to be developing). I set an ambusher, hopefully to facilitate catching the 1<sup>st</sup> brood.

25 May

1900. Skit! The ambusher has fallen down and is dangling below the hole! No telling how long it may have been there. I can only hope it hasn't caused them to abandon the nest.

Meanwhile, a baby (maybe more?) is in the rotten hole up above the nice new one I kept hoping they'd nest in.

26 May

1900. Set ambush at the crummy hole. And yes, the nest is empty - operator error.

27 May

2000. A successful ambush tonight in the new hole above the enclosure: 3 NOBTA juvs!

4 July

1330. Banded the 2 kids in the 2<sup>nd</sup> nest (same hole), 2914-2915.

22 August

In the process of setting ambushes (we apparently missed 1 or 2 more kids from the 1<sup>st</sup> nest) it turns out there's





1997  
1998

Walter D Koenig

2

Melanerpes formicivorus

School Hill

HNHR

(22 Aug) another nest here! The first of the fall! It's in the same hole as the others down in the enclosure. It has 1 baby ~1 week old and 1 unhatched egg.

23 August Ambushed (0500) at the new upper hole - 4 birds, including 1 additional kid from the 1<sup>st</sup> nest who was molting to a ♀. This makes 4 from that (missed) nest thus far; they may be 1 more to go.

4 October 700. Ambushed the old Blue Oak hole down next to the path, but only got 3 birds, all banded. Where did everyone else go?

1998

15 April

Ken reported a power struggle here this morning! I went up to check at 1600, at which point there was still some activity, but not too much.

① ♀ ~~Red-Wh/Red~~

② ♂ MOr  
M / Blk-Yellow

③ ♀ Red-Blk/Red

④ ♀ DG/M

⑤ ♂ M/DB-Yel(N)

⑥ ♀ M/Mauve

⑦ ♀ LP/LP-?

⑧ ♀ LG-WH(N)/M 2966

⑨ ♀ DB-WH(N)/M 2554

⑩ ♂ DB/LG 2381

1640. Leaving. lots of birds here! Some chasing; mostly just sitting.

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1998  
1999

Walter D Koenig

3

Melanerpes formicivorus

School Hill

HNH/R

22 April

Plenty of stores here, but activity is back down and no one is in any holes.

7 May

1145. Bird in last year's hole. 2 eggs, fresh. Measured and collected 1 for hormones:  $25.2 \times 20.4$  mm. One egg left.

17 May

1115. Checked the hole: only 2 eggs, only 1 of which is developed! Guess taking an egg ~~out~~ wasn't a good idea after ~~noon~~ all. Might want to transplant it and let them try again.

21 May

1315. 1 baby, ~ 2 do. May transplant birds here if possible. But if not, band ~ 9 June.

27 April

1200. Lots of stores, no one in any holes. Checked the 1997 hole, though. empty, but in good shape.

28 April

1530. 2 birds in the 1997 hole, but still no egg.

12 May

1130. Bird flushed from the (old) low hole in Tree #1! Checked it: it's in good shape, but empty.

21 May

1330. Checked low hole: 2 fresh eggs! Measured & marked: (1)  $24.7 \times 20.8$  (2)  $24.9 \times 20.2$

26 May

1015. 4 eggs now. (2 marked, 2 not). Should hatch ~ 2 June.

2 June

1715. 2 babies, ~ 5 do (band 23 June) + 2 unhatched eggs, #1 and unmarked (3)  $25.5 \times 20.7$  mm. Both undeveloped & removed.

20 June

1545. Bird in (other) hole! (#276). Checked & empty, but in good shape. A few (but only a few) stores left.

June 1999

Somewhere between

11 June (when the nest was  
watched) and banding (23 June)  
I checked the nest & found it  
empty except for a big  
pellet. Looked owl-like to me  
but I'm still getting opinions  
as to it being a snake.

1993  
1994

Walter D Koenig

Melanerpes formicivorus

School Hill West

HNHR

25 January

1515. Counted stores: Nest tree: 220 } 337.  
Tree further out: 117 }

Hardly lots, but there are definitely birds here storing.

10 April

1420. Bird in the high hole.

21 April

1340. Bird flushed from the low hole this time. Guess I'll wait a bit before bothering to check either of these; possibly they haven't made a final decision yet.

By the way, there are a few stored acorns still here!

30 April

1415. Bird in top of tree, but not in either of the holes.

4 May

1300. Bird in low hole in granary: 4 fresh eggs.

14 May

1010. Checked hole: 3 young babies, ~ 2 do, plus 1 dead baby. So: all hatched, 1 brood reduced already.

ELED: ~ 1 May. Bant on or about 3 June.

16 May

1340. In blind, watching.

1350. ♂ (BIR-W(N)) #1608. ♀ Or-LG / M #1998. Breeding pair from last year. Now - any helpers?

1440. ♂, ♀ each have made 1 more trip (2 apiece).

1520. Leaving. Total # feeds on back. No sign of anyone besides the pair here, at least at this point.

2 June

1200. Banded & bled the 3 babies here!

4 July

900. Noone in either of the holes. Stores exhausted.

1994

21 January

1200. Counted stores: Nest tree: 355 } 565. Not bad at all  
Tree (snag) further out: 210 } for these guys!

13 April

1600. Noone in any holes, but still stores here!

3 May

1300. Bird in hole! 4 eggs, incubated. Sizes are:  
(Same hole as usual)

1993

16 May 1340-1520

Nest watch (100 min)

Feeding trips

Time to 1<sup>st</sup> feed: 10 min.

♀ 1998 IIII = 5

♂ 1608 IIII = 5

# babies: 3, 4 do (est.)



1994  
1995  
1996

Walter D Koenig

2

Melanerpes formicivorus

School Hill West

HNHR

(3 May)

①  $23.8 \times 19.7$  ②  $23.7 \times 19.8$  ③  $23.5 \times 19.1$  ④  $22.4 \times 18.6$

Still stores here.

12 May

1300. Checked nest: 3 babies + 1 unhatched egg (#4 - which appears to have developed but not hatched).

Wts: ① Maure: 34.6g ② Blk-Wh(N): 32.7 ③ NOBA: 39.6.

Day 8-9!

25 May

1400. Banded & bled the 3 babies here!

7 July

1000. There are still a few acorns remaining here!

1995

25 April

1400. Flushed a bird from the area (there are stores) but no sign of a nest.

29 May

1600. Power struggle here: ① ♀ Or/Ret/M #2507 (WGate)  
② ♀ M/Ret-DBlue #2502 (Wk) ③ ♂ R-W(N)/Maure #2506 (WGate)  
④ M/DB-Red ?? ⑤ ♀ Blk-Or/Or-Blk #2502  
⑥ ♀ Or-LB/or #1998 ⑦ ♂ LB/Blk-BPK(N) #1608 } together

The pair is here after all! Apparently an attempted coup by the WGate ♀♀.

13 June

1300. Nobody up here; no one in the hole. Also, no stores remaining to speak of.

1996

3 January

1400. Counted stores: Main tree: 340 } 410  
Snag to the West: 70 } 22.

Fairly typical here, I believe.

11 January

Ambushed the traditional hole here tonight, nabbing 3 birds.





1996

Walter D Koenig

2

Melanerpes formicivorus

School Hill West

HNHR

11 May

H45. Worms in the hole. Also, there are a few shells, but no intact stones left here, best I can tell.



1997  
1998  
1999

Walter D Koenig

Melanerpes formicivorus

School Hill West

HNHR

7 May

830. Bird in hole! 6 eggs, a couple days incubated.  
Measured 2: ①  $26.6 \times 19.2$  ②  $26.7 \times 18.9$ .

There are still stores here.

12 May

1330. 6 eggs. 1 of these is very small - possibly even a runt - except that it appears to be developing! Should hatch in a couple of days. ("15 May").

4 July

No stores left. Also no sign of a 2<sup>nd</sup> nest.

1998

22 April

A bird flew up to the traditional hole here as I walked up, suggesting something, at least. However, I didn't hear anything so I doubt they have kids. Also, they appear to be out of stores.

7 May

1215. No one in the traditional hole. I climbed up and opened it just in case: it's empty but in OK shape.

17 May

1045. Birds here - Dale & I scared off at least one as we arrived. But no one in the traditional hole.

21 May

1330. No sign of life here.

1999

27 April

1130. ♀ in new hole, 2' above old hole. A few stores also.

28 April

1500. Opened the hole: empty - they're still building it.

12 May

1130. No one in my holes.

7 June

1630. A bird in the tree, but no one in the hole. Also climbed up and peeped the new hole - no sign of anything.



1993  
1994  
1995

Walter D Koenig

Melanerpes formicivorus

Arf too

HNHR

18 May

900. Bird in upper hole: peeped it: 4 eggs (1 a runt?)

213 May

1510. Banded & bled the single baby here.

MTB says: ~10 acorns left in April; none now.

1994

2 May

1650. Bird in upper hole.

9 May

1440. Checked hole: 3 babies + 1 unhatched egg. See Joey's notes for weights and measurements (of the infertile egg).

1995

25 May

Joey got up here once a couple weeks ago but basically we've had to ignore these guys because the road still hasn't been cleared. However, I made it up here this afternoon and, like our prior checks, saw nothing. I even peeped the 2 holes, but no sign of a nest, impending or otherwise, in either.

Also, no stores remaining here, by the way. Of course we can't really be sure there's even a group here at the moment...

1996

10 June

1515. Haven't seen her here this year until now: bird in the upper hole. However, I went up and checked it and found it empty (but in good shape anyway).

27 September

930. Banded and bled the single fall baby here.



1997  
1998

Walter D Koenig

1

Melanerpes formicivorus

Arf, too

HNHR

20 April

1600. Checked the nest: 2 babies [~2 to] and 1 unhatched (but developed) egg.

10 July

1000. No stores or birds in holes here.

1998

22 April

No AW in the holes, but a Pygmy Owl was in the lower of the 2 traditional holes.





1997  
1998

Walter D Koenig

1

Melanerpes formicivorus

The Arnold

HNHR

3 April

1530. Came up and made the tour with Joey. Lots of stores everywhere, including Schwartz; Fanny Arnold, UAZ, and even in the tree between LAZ and Bianca (not even sure who's storing here). But noone in holes anywhere! I guess things aren't rolling here yet.

10 July

1100. Walked around with Joey looking for nests. Acorns still at: Black Oak; Phobo; Bianca (a few in the tree they nested in this spring); LAZ (lots); UAZ; FAAR; Arnold Schwartz; Lambert; Keep Out (didn't look. but surely have lots); Al. In other words, everyone!

1998

22 April

Walked around the groups here. Everyone has acorns, including Black Oak (lots), Phobe (lots), Bianca (some), LAZ (lots), UAZ (yes-stores), FAAR (lots), Keep Out (lots), Swartz (some), and Lambert (only a few!) and Al (lots).  
Noone in any holes, however!  
Only Lambert is close to being out of acorns.



1993  
1994

Walter D Koenig

Melanerpes formicivorus

Black Oak

HNHR

3 February

1530. Counted stores: Central area: 330 (!)  
Side area: <sup>Main</sup>VO : 612  
                  <sup>other</sup>VO : 304 } 1246

This is a remarkably lackadaisical showing here - either there weren't that many acorns around (but what about Bianca's fall nest?) or they just didn't try very hard. Granary space not more than 25-35% full, I'd say.

7 April

1000. A few stored acorns remaining here, but hardly a lot. Noone in any holes.

28 April

830. Stores still remaining. Noone in any holes, however.

12 May

1030. Ditto. Surely there's a nest here somewhere. Maybe a roosting expedition is in order.

18 May

1040. Watching here for a sign of something.

1130. Bird (♀) in poison oak hole. That's it, I'm afraid!

1140. Still no changeover. Incubating? I'm off.

24 May

1600. Finally checked the hole: 3 babies, ~23 do! Est Hatch date ~1 May! Est LED = 20 April! Good thing I finally got up here!

25 May

810. Veronica up here for a watch.

1200. Banded & bled the 3 babies.

15 June

1000. A quick pass revealed no obvious sign of a 2<sup>nd</sup> nest.

1994

4 February

1300. Counted stores: Central area: 1580  
Side area: <sup>Main</sup>VO : 1150  
                  <sup>other</sup>VO : 440 } 3170.

Pretty respectable for a change.



1994  
1995

Walter D Koenig

2

Melanerpes formicivorus

Black Oak

HNHR

11 April 900. Quite a few stores left. No birds in any of the known holes, however.

1130. Second time around: bird in old nest hole, relatively low in central Valley Oak facing back toward Arnold Cabin. Went up and reopened the hole, finding 3 fresh eggs (marked 1-3).

15 April 1100. Checked nest: 4 eggs. Measured: ① 24.7 x 17.9  
② 26.0 x 17.4 ③ 25.5 x 17.6 ④ <sup>Laid 12 April, presumably</sup> 24.7 x 17.1

24 May Granary still loaded.

1530. Based on watches by Mark & Jeremy, as well as a brief look myself, there would appear to be a new group in the ~~central~~ "side" area here, going over to the forest on the Bianca side (see map on back). I watched a very nice-looking hole in the trap tree for a few minutes but no sign that it's a nest, or at least that it's ~~no~~ now active. Apparently there are several NOBAs in this group, which I will call SIBO ("sibling" of Black Oak). [=Phobo]

If nothing else, this hole is a very likely roost hole. Birds definitely hang out here.

8 June 1600. Checked the 1<sup>st</sup> nest hole, where birds had been lurking on occasion, but it's empty.

1995

21 April 1600. Bird in hole (same as last year's): 4 eggs, incubated. I marked them and measured one (marked #1): 24.7 x 17.4 mm.

26 April 1430. 4 babies, 3-4 do. Plenty of stores still here.

16 May 1130. Banded & bled the 4 kids here. Plenty of stores left.

29 June 1400. No sign of a nest, but still some stores.



1996

Walter D Koenig

Melanerpes formicivorus

Black Oak

HINER

9 January

1430. Counted stores: Main tree (central area): 235.

I'm assuming that whatever is over in the "side" section belongs to Phobo.

12 April

No stores here anymore, but they've apparently been using Phobo's stores recently. However, they're almost out also, so things are almost gone here either way.

27 April

No one in any holes.



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1998 Walter D Koenig

Melanerpes formicivorus

Black Oak

20 May 1300. Finally opened the nest here on our 3<sup>rd</sup> attempt. <sup>HNHR</sup>  
4 babies, ~ 8 days old. Band by ~ 6/2. Plenty of  
stores left here.

1999

2 July

A few stores; not much, though.



1994

Walter D Koenig

1

Melanerpes formicivorusSIBO - FOBO - PHOBOHNHR25 May

1045. Came up to the new hole in the large Black Oak over 1/2-way to Bianca to set an ambush, only discover upon opening the hole that they have 4 babies, ~22-3 days old! I banded them and then set the ambush anyway.

From last night's watch I'd say there are 3 birds in this group. I can at least catch a ♂ by ambushing tonight, but maybe I can get someone else right now.

These birds, whoever they are, have stores over in Black Oak's former "side" area.

28 May

830. Back up to try and catch adults feeding. Apparently there are indeed 3, 2♀♀ + 1♂, all NOBAs!

920. Got the ♂.

1100. Giving up. Will have to try for the ♀♀ tomorrow.

29 May

615. Back again.

700. Got one of the ♀♀!

815. Got the 2<sup>nd</sup> ♀♀!

845. Leaving.

1 June

Katy did a watch here today and saw another NOBA ♂!

3 June

1330. Finally made it up to look into getting the 2<sup>nd</sup> ♂, but the babies literally fledged when I looked in on them. So instead I set the ambush and will watch for a bit just in case I get them (him) still coming to "feed", but otherwise will try to see who roosts here.

8 June

2000. Watched roosting here, seeing and hearing zilch, even though over at Black Oak things were hopping. I even went down to S080, but saw nothing. It's as if these birds have vanished as quickly as they came. Are they still here?

1. The first part of the paper discusses the importance of the study of the history of the United States. It is argued that the study of the history of the United States is essential for a full understanding of the country and its people. The paper then goes on to discuss the various factors that have shaped the history of the United States, including the role of the federal government, the influence of the states, and the impact of the people.

1994 Walter D Koenig  
1995  
1996

2

Melanerpes formicivorus

Phobo

HNHR

(8 June) Will they continue to use Black Oaks' side area? Where have they gone [back?] to?

1995

26 April

1415. Noone seen in any holes.

24 May

1430. Bird in last year's nest hole!

25 May

1400. Bird in hole again.

30 May

1530. Set ambusher - Joey checked hole: 2 eggs, 2 hatchlings

21 June

1315. Banded & bled the 2 kids here.

There are stores remaining here (near end of Black Oak area).

1996

9 January

1430. Counted stores: Main rd: 745 & 1045.

(Site area  
"Black Oak")

Snag: 300

This is pretty good, especially compared to Black Oak next door. Of course, it's possible that this is Black Oak's again; hopefully Ellen knows what's up here.

12 April

1515. A few stores left here, but both these guys and Black Oak have been running through them fast.

27 September

1000. Banded and bled the 3 babies here.



1999

Walter D Koenig

Melanerpes formicivorus

Photo

HNHR

9 July

Maybe a very few acorns here; I saw 2. For all practical purposes, they're out.





1993  
1994  
1995  
1996

Walter D Koenig

## Melanerpes formicivorus

SOBO

HNHR

3 February

Granary here is virtually, more likely totally, empty. Amazing how could it have been such a good fall for a lot of the Arnold and so bat over on this corner?

No sign of any birds, either. Presumably ~~group~~ <sup>group</sup> has abandoned.

28 April

815. Looked around for a nest and/or sign of birds; no luck.

12 May

1020. Still no sign of life here.

18 May

1145. Continued deadness here. 1150. Wait! Some walrus off to the side....?

17 June

9100. Still no sign.

1994

4 February

1230. Granary here is empty. Territory would appear to still be deserted.

11 April

900. No sign of stores or birds here. Artificial nest cavity still looks fine, however.

1995

30 May

No sign of anyone here.

1996

9 January

1440. No intact acorns here, but there are 50 or so shells that look like they've been eaten relatively recently. I think there might even be someone here....



1993  
1994

Walter D Koenig

Melanerpes formicivorus

Arnold 1

HNHR

4 February

1130. Counted stores: 3445. Doing quite well here.

No sign of a group at Big Tree, by the way.

7 April

Stores still remaining here.

28 April

Quite a few stores " "

12 May

920. Bird (♀) in traditional hole. The newest, no doubt (1st nest had all dead eggs!)

1200. Climbed up to check: 5 eggs (+ 1 acorn); all look normal and probably incubated (but I only peeped the hole).

21 May

1545. Checked nest: 2 hatchlings (already quite different in size - 1 probably hatched yesterday); 1 egg pipping (heard call),

~~1 egg, dead white~~ 1 dead egg, developed, + 1 egg, undeveloped.

So they may end up with 3 babies, but probably only 2.

Est hatching date: 20 May; band on ~ 11 June.

8 July

Plenty of stores remaining.

1994

4 February

1030. Counted stores: 4360. Impressive, to say the least.

Nothing to suggest a group at Big Tree.

11 April

1045. Granary still loaded. No one in any of the normal holes, however.

2 May

1520. No one in any holes. 2 birds in the granary, however.

11 May

1145. Still can't find any trace of a nest. This group needs watching.

13 May

1230. Watched for 1½ hrs; at one point I thought the ♀ might be collecting food, but they seem not to be feeding, best I can tell. For one thing they are hanging out all over the area.

13 June

1900. Climbed to the 2<sup>nd</sup> nest, which is in the hanging limb hole:



1994  
1995

Walter D Koenig

2

Melanerpes formicivorus

Arnold 1

HNHR

(13 June)

81222  
+  
1 other ♂  
roosted

4 kids, about 4-5 days old (a guess). Est LED: 28 May 2000. Watched roosting here. First came ♂<sub>M/E-W</sub> #1027, then after a bit ♂<sub>LG/W</sub> #1026. But then, ♂<sub>Yel/or</sub> #1222 came, and one of the 1<sup>st</sup> 2 ♂♂ left and roosted over in the 1<sup>st</sup> nest hole! ♂1222 then entered. So all I can really say is that all 3 were there, ♂1222 + 1 other roosted (either ♂1026 or 1027).

29 June

830. Banded & bled the 4 kids.

18 July

1845. Plenty of stores still here.

1995

\* 21 April

1530. 2 birds in new hole just on traditional limb in granary. Opened it: 5 eggs, 1 looks incubated, rest still translucent.

I measured one: 23.3 x 18.5 mm. No runts or anything.

3 May

1030. Came to check the nest, only to find that the limb has (finally) fallen, taking with it the hanging limb hole as well as the old traditional hole facing the road! One of the few casualties due to falling limbs, and the loss of an old limb friend, of sorts. RIP!

11 May

1025. Bird in new hole, high in snag in forest above granary! Will require the big ladder, I fear! fairly fresh, anyway.

16 May

1030. Opened the new hole! 9 fresh eggs - no runts - and one with a dent in it! Apparently now 2 ♀♀ here??

30 May

1445. Checked hole: 6 kids, 10-11 do! Set ambush here.

1 June

1400. Banded & bled the 6 kids here.



1996

Walter D Koenig

Melanerpes formicivorus

Arnold I

HNHE

9 January

1615. Counted stores: 1765. Pretty good, considering this tree is basically falling apart.

12 April

1515. Still some stores here, but none in any holes.

24 April

Saw another one this morning, rubbing all 4 border holes.

10 May

1150. Still some stores left. No more any holes however.



1875

1875





KAB  
1999

Walter D Koenig

Melanerpes formicivorus

AI

HNHR

12 June

Found the nest! (Joey) high up in a new hole in the Valley Oak above the granary. Kids are old, and I bolted. We banded two. I eventually found the third, but then he got away. However, I think we can assume they fledged 3, and that ~~ADD~~ est. LFD was about ~29 April.

1999

30 April

1420. Checked nest. 3 eggs, 1 a runt! There were 4 back on 24 April so!  $\odot$ EFED = 22 April, hatch date = 7 May, 2 ♀♀ here, apparently!



1993  
1994

Walter D Koenig

1

Melanerpes formicivorus

Keep Out

HNHR

4 February

1000. Counted stores: Main Tree: 2673 } 3277  
Other areas: 604 }

About everything is loaded here. This group now has one of the largest facilities around! (1300 of those acorns were in the bark of the main Keep Out tree).

7 April

Quite a few stores left here.

12 May

930. Bird in new hole in burned live oak snag. Stores still here.

18 May

930. Finally got back to check the (new) hole: 5 eggs, incubated.

21 May

1530. Still 5 eggs (1 a runt?).

24 May

115. Nest empty! No shells or anything in it. Yet another failure here. Still stores here, so it's certainly not that...

25 May

840. ♂ in a higher hole in the burned-out tree! Checked it: empty. Maybe they'll try again, however.

4 June

1400. Noone in the high hole. ... like they've given up.

12 June

1200. Nope! Now in the high hole: 4 eggs, incubated.

8 July

Acorns remaining in ...

1994

4 February

1100. Counted stores: Main tree: 1925 } 2010.  
Other areas: 85 }

Not up to last year's standard, but still a good showing here.

11 April

1030. Granary still full; noone in any holes.

15 April

1130. Noone in any holes.

2 May

1510. " " " "

1605. Bird in hole! Nests (short) latter.

9 May

~~1700~~ 1700. 4 eggs - undeveloped & infertile!! For measurements, see Joey's notes.



1994  
1995  
1996

Walter D Koenig

2

Melanerpes formicivorus

Keep Out

HNHR

13 May

1100. Mark's transplants still alive.

1 June

945. Banded & bled the 4 babies - all of whom are transplants (from the aviary...?)

18 July

945. Plenty of stores here still.

1995

24 May

1400. Checked the nice new hole over on Hastings that Joey opened last week, but still empty! Plenty of stores left here, however!

29 June

1440. Still stores here, & no sign of a nest.

1996

9 January

1600. The granary has a fair number of empty shells but not much in the way of intact acorns. My count came up with 75, which is probably not an overestimate. Are there even birds here?

12 April

1435. Out of stores here, for all practical purposes.

23 April

830. Pretty good power struggle! 10-15 birds involved; all of us are up here. Put up a net next to the granary. It's mostly banded birds here, however.

(1) ♀ <sup>PL</sup> D2/D2

#2602

(2) ♀ <sup>PL</sup> ~~D2~~ / <sup>OR</sup> D2-15N(N)

(♂ 2213)

(3) ♂ <sup>PL</sup> ~~D2~~ / <sup>OR</sup> D2-15N(N)

#2686

3P? →

(4) ~~SK~~-R2 / R2-SK #2418.

910. Caught ♀2602.



1999

Walter D Koenig

1

Melanerpes formicivorus

Keep Out

HNHR

25 May

1230. Found the nest, about 2' higher in limb in tree over on HNHR side. 3 kits (bottom broken off!) Old enough to band.

9 July

Stores: Yes.





1995  
1996

Walter D Koenig

1

Melanerpes formicivorus

Arnold Schwartzegger

HNHR

21 April

1700. Bird in crumbly hole over by the dump! Opened it:  
3 eggs, fairly fresh. Measured one: 25.5 x 19.0 mm.

26 April

1300. Noone in the hole, but there are still 3 eggs and they  
look incubated.

3 May

1000. Eggs have hatched: 3 nestlings, 1-2 do.

11 May

900. Still 3 kids. Jim going to do a watch here.

16 May

915. Heard the kids here as I walked by.

24 May

Banded and bled the 2 kids here this afternoon.

There are still acorns left here!

1996

9 January

1545. Counted 102 stored acorns here, almost all in  
the main tree. (There are only a few in the limbs in the  
small valley <sup>in the direction of</sup> ~~over stream~~ Keep Out.)

12 April

1430. No stores left here, best I can tell. The old  
nest hole in the big VD, and last year's nest hole,  
have fallen.

11 October

A nest! With old babies, right next to last year's  
in a knothole. Banded 2 kids



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1

1997  
1998  
1999

Walter D Koenig

Melanerpes formicivorus

Arnold Schwartz

HNHR

24 April

1015. ♀ Or-LB/LB-Or #2561 sitting in tree in ravine. A hole in that tree not too far away looks promising.

16 May

Bird in a hole! Don't know how we'll get up to it - we may need the ladder.

10 July

Still stores here

1998

2 June

1400. Still no sign of a nest, but there are still stores.

1999

25 May

No sign of a nest. Stores: Yes.

1944

1944

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1993  
1994

Walter D Koenig

Melanerpes formicivorus

Lambert

HNHR

4 February

1030. Counted stores: "Main tree": 410

"Hart" Fallentree: 1063

"Lamb" FT: 0

1473.

Note that the VC on Hastings down below the granary/nest tree has fallen; I'll have to check for an estimate of the loss in holes (it had been disintegrating for some time). Holes that remain are basically filled except for the Lambert Fallen Tree, which is still not being used.

No indication of anything or anybody at Arnold Schwarzenegger, by the way.

28 April

900. Acorns remaining here in the "Hastings" fallen tree.

12 May

940. Noone in any holes here, but there are still stores.

18 May

1015. ! Bird in new hole in fence line tree up from traditional tree.

Peeped hole: 4 eggs, freshish (prob. a couple days incubated)!

21 May

1530. Still 4 eggs.

25 May

830 Still 4 eggs; bird incubating. Rebecca up here for a watch.

1 June

1000. I put a pin in the hole. I opened the hole and put a band on them.

12 June

1230. Babies are screaming away.

19 June

900. Banded 4 of the 4 birds. Stores remaining in fallen limb # in Hastings Tree.

8 July

No stores left, as I can tell.

1994

4 February

1115. Counted stores: "Main tree": 1155

"Hart" Fallentree: 1600

"Lamb" " " : 5

2760.



1994

Walter D Koenig

2

Melanerpes formicivorusLambertHNHR

(4 February)

An excellent showing. These 2 trees are quite replete.

Ret alert! There are 310 acorns stored in the Arnold Schwarzegger tree! Who are these birds? Is there a separate group here again? Time to get on Wendy and Jennifer's butts.

Also note: last year's (Lambert) nest hole has fallen.

11 April

1035. Still some stores at Swartzegger; birds are calling on the side of the hill and thus could belong anywhere.

Up at Lambert itself there are plenty of stores but none in any holes.

15 April

1130. Bird in hole in traditional nest tree: 2 eggs translucent but dirty. Measured them: ① <sup>Dirtier</sup> 25.4 × 20.3 ② <sup>LED dirty</sup> 24.2 × 19.8 (egg #2 probably laid 1st.)

20 April

1110. Checked hole: 5 eggs. New ones are ③ <sup>Dirty</sup> 25.3 × 20.1 ④ <sup>Dirty</sup> 25.3 × 20.1 ⑤ <sup>cleanest</sup> 24.3 × 18.7

Hence, ~~eggs are~~ <sup>LED</sup> Dirtiness of the eggs makes a fairly nice chronological gradient, from egg ② - ① - <sup>same</sup> (3-4) - ⑤.

Presumably egg ② (FED) was 14 April, while egg ⑤ (LED) was 18 April.

20 May

1645. Banded & bled the 4 babies. Stores still remaining.

25 May

Not only are there still stores at Swartz, they have a nest in the old nest tree with very old kits that Jeremy found a few days ago!

18 July

1850. Lots of stores remaining.





1995  
1996

Walter D Koenig

Melanerpes formicivorus

Lambert

HNHR

26 April

1315. ♀ in old hole (#28), highish up in traditional nest tree.

Re-opened it: 4 babies, 2-3 do, no eggs.

Quite a few stores remaining here.

11 May

915. 3 kids here, looking fine.

16 May

930. Banded and bled the 3 kids, who are pretty emaciated. There are stored acorns left here.

29 June

Still stored acorns here (Joey).

1996

9 January

1590. Counted stores: Nest tree: 410

"Host" fallen limb: 570

} 980

Not bad. Note that many of the holes in the nest tree are, I believe, new.

12 April

1430. Birds still have stores here. None in any holes, though.

16 June

915. 3 kids here, looking fine. Banded and bled the 3 kids, who are pretty emaciated. There are stored acorns left here. Still stored acorns here (Joey).

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Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The number of transformed cells was determined by the number of colonies obtained on the selective medium. The results are the mean of three independent experiments. Error bars represent the standard deviation.

1998

1999

Walter D Koeling

1

Melanerpes formicivorus

Lambert

HNHR

20 May

Out of stores here for all intensive purposes. Is anyone here anymore?

25 May

1399

No stores, but a bird was in the area.



1993  
1994

Walter D Koenig

1

Melanerpes formicivorus

Fanny Arnold

HNHR

4 February

1100. Checked stores here, finding 420, mostly in limbs over by the old fence line. At least there's something here!

12 May

1000. No one in any holes here. ~~There is a nice newer one in the big VD up along the fence beyond the traditional tree, though.~~

25 May

015. Still looking for a bird built with mud in its bill in the traditional hole. So I watched for a while and then checked around again but found nothing. Perhaps it was an in ovo? There's really little sign of anything going on here, or even that a group still exists.

27 May

1700. Bird here with mud again. I'm now sure there's a nest here but I can't find it. I'll have to look for it.

29 May

915. Working from H. in.

930. Someone came and got - but where, exactly? Moving H. in.

945. Babies looking out! (Upper opened hole!)

1030. Banded & bled the 4 kids!! That was close!

Babies ~29 to 30 days old. (Bled 24-25-26-27-28-29-30-31).

1994

4 February

1140. Counted stores: 1050. Stores are scattered around; in particular, maybe half <sup>are</sup> ~~were~~ in the dead old nest tree by the old fence line. A pretty good showing given the loss of the granary here a couple of years ago.

11 April

1025. Quiet here, but birds in the area. Stores remaining. No one in any holes.

2 May

1515. Bird in hole! Checked it: 5 incubated eggs (not measured).

11 May

1030. Checked hole: 3 babies, no eggs. Blk: 42.2g Red: 37.0g LB: 38.7g

About 9 do. Band ~23 May.



1994  
1995  
1996

Walter D Koenig

2

Melanerpes formicivorus

FAAR

HNHR

24 May

1230. Banded & bled the 3 kids here.

By the way, there are still acorns in a limb low in the nest tree, so these guys are not out of stores even though they have no real granary.

1995

21 April

1430. Bird in hole! Checked it - empty but in OK shape.

There are a fair number of acorns remaining here, mostly in the old ~~tree~~ spindly VO over by the fence (where there are several old nest holes - but the ~~tree~~ tree is largely disintegrating).

24 May

Banded the 4 kids here! There are still stored acorns here, amazingly enough.

29 June

And still some stored acorns here.

1996

9 January

1540. Birds have made the spindly old nest tree by the old fence (now dead) into a recent granary with 750 acorns! Along with another 80 in the snag across the fence, these birds have 790 stored acorns - not bad at all!

I'll have to look and see if I have any notes to this effect, but I think that most of the holes in the new granary are new since 1993-94, at least.

12 April

1435. Birds still have stores here! No one in any holes, though.

7 June

1030. Banded & bled the 2 kids here.

Still some stores here!

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1997

1998

1999

Walter D Koenig

Melanerpes formicivorusFanny Arnold

HNHR

24 April

1140. Bird in upper (old) hole in traditional hole:  
3 babies [ $\sim 1$  do] + 2 eggs, 1 pipped a bit and the other a  
runt. Pipped egg:  $26.2 \times 19.6$  Runt egg:  $20.7 \times 16.2$ .

16 May

1230. Got lucky and caught the ♀ at the nest, even  
though the kids are pretty big. Turns out she's a  
NOBA, which means she may or may not be old ♀ 1371  
(she was certainly big enough, but who knows? We  
might very well be able to tell from her DNA.) So,  
she's now banded, in any case, as are the 4 kids.

There are stores here, as about everywhere else.

10 July

Still stores here.

1998

15 May

1430. 5 babies (1 clearly on the way out);  $\sim 8$  days old (eyes  
not open yet but otherwise big). Stores here? Yes.

Band  $\sim 28$  May.

1999

25 May

1345. Lots of stores! Also found the nest: a new hole  
in the dead granary, relatively low, fortunately.  
They have babies, but we need a ladder to open it.

27 May

1100 Opened the hole: 4 kids,  $\sim 19$  do! (Hole #27A)

9 July

Stores: Lots.

1911-1912

1911-1912

1911-1912

1911-1912

1993  
1994

Walter D Koenig

Melanerpes formicivorus

Upper A2

HINHR

4 February

1100. Counted stores: "Main" VO: 20 } 1050.  
Snag: 1030 }

Not too bad, but even the snag is nowhere close to being replete.

7 April

1145. Stores are gone! No sign of any birds, either.

12 May

1005. Noone here in passing or in any holes.

25 May

1030.

15 June

900.

9 July

1030. Birds flushed from main one, but nothing else in evidence

1994

4 February

1145. Some stores here! 425, virtually all in the snag. Nowhere close to capacity, but someone is here.

11 April

1015. Looks as though the stores are all gone. But 1 ♂ flushed as I arrived, so birds are still hanging out here.  
1017. ♂ NOBA back in area.

~~The~~ Nest tree slightly down the hill over toward old A3 has fallen.

1996

9 January

1530. No stores here.

27 April

915. Several birds up here and in between here and A2; possibly some power struggle activity.



1997  
1998  
1999

Walter D Koenig

Melanerpes formicivorus

UAZ

HNHR

14 April

1400. Bird in hole! The old, traditional, one. Opened it:  
4 fresh eggs. Set an ambush for later use.

10 July

still across here.

15 May

1540. 3 babies, <sup>1998</sup> 3 ~~days~~ days old, + 1 pipped but unhatched  
egg. Band - 2 June. Stores? Mais oui!

25 May

<sup>1999</sup>  
1300. Joey found the nest. It's in a hole in the  
old nest tree down the hill, facing south ravine!

9 July

Stores: Yes.

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www.ck12.org

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1993  
1994

Walter D Koenig

Melanerpes formicivorus

Lower A2

H/A/H/R

3 February

1630. Counted stores: Main (burned) tree: 3343 } 3546  
Other misc: 203 }

These guys are loaded and doing fine. Misc areas ~~could~~ <sup>could</sup> hold more, but the main tree is essentially full.

7 April

1130. Lots of acorns still here; also several birds and some activity of some sort.

12 May

900. Banded & bled the 4 babies here. Lots of stores still.  
2 → (2 transplanted from aviary)

29 May

100. 2 birds were seen near the main tree but not in it: 4 eggs at fresh (possibly) hole.

1994

4 February

1245. Counted stores: Burned tree: 4010 } 4470  
Others 460 }

Looks like these guys got the "Max acorns stored" award. The waves of acorns in the burned tree are truly astonishing.

11 April

1010. All quiet here. Plenty of stores, but none in any holes.

15 April

1115. Bird flushed from hole in near Blue Oak. Unfortunately, it's a new hole out in a ladder limb (a full 20' one, most likely).

16 April

1700. Opened the hole: 4 babies, ~3-4 d old. Also set up a blind.

17 April

Jeremy's watch this morning suggests only 1 breeding ♂ is still here:

9 May

1630. Banded and bled the 3 babies. One was hidden in back, but I don't think I missed any. Plenty of stores here.

6 June

1645. 4 eggs in old nest hole in other tree. Won't hatch soon, if at all.

8 June

1510. Still 4 eggs, all but 1 possibly fertile (but if so, they are

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1994  
1995

Walter D Koenig

2

Melanerpes formicivorus

LAZ

HNHR

(8 June)

only a few days old). Measurements: <sup>Def. infertile</sup> ①  $24.5 \times 19.8$   
②  $23.8 \times 19.4$  ③  $23.8 \times 19.8$  ④  $23.8 \times 19.6$ . Birds flush  
from here long before I arrive, but I think incubation  
continues.

14 June

1515. Eggs are still there, warm, and looking more and  
more infertile every time.

18 July

Loads of acorns still stored here.

31 August

Missed a nest here —

20 December

1900. After 2 messed up ambushes at the early '74 nest  
hole (facing down in left-hand forest tree) (wait-maybe  
this wasn't where the nest was...) ... In any case, I got 2  
birds tonight, including ♀ 2214 and a ♀ NGBA - now  
♀ 2571 - one (the only?) kid from the missed nest! A winner!

1995

26 April

1400. None in any holes. Plenty of stores left.

3 May

1100. A bit of power struggle activity going on here, apparently  
spilling over to LAZ. Also had some here earlier (in April).  
Perhaps a replacement occurring?

25 May

1330. Finally! Bird flushed out of easy hole.

1340. 5 eggs! Fresh. Measured 2:  $24.8 \times 20.0$  &  $25.1 \times 19.7$ .

Finally!

30 May

1500. Still 5 eggs.

21 June

1400. Plenty of stores remaining. Banded & bled the 3  
kids.

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1996

Walter D Koenig

Melanerpes formicivorusLower Arnold 2

HNHR

9 January

1520. Cereamy is loaded here: 3200, and I suspect I missed quite a few. Note, however, that 1/2-1/3 of the stored acorns look old and are almost certainly from last year! Hence, the number of functional stores here is not all that much - perhaps 2000+.

12 April

1455. Lots of stores still here, but none in any holes.

4 June

1030. Banded & bled the 4 kits here (2 + 2 transplants from Plaque put here 22 May).

11 August

No stores left here!

27 Novem

630. In our continuing pursuit of the 2 NOBA ♀♀ here (who are somehow coexisting with ♀1873 in some unclear way) we ambushed at the horizontal hole (where we had caught ♀1873 and one of the ♂♂ a month ago or so) and missed 1 bird. We also ambushed at a new hole on the back side of the same tree and got 2 ♂♂, both banded.

So where are these ♀♀? I'm beginning to think they aren't roosting here at all, going along with my intuition that there is something strange about them - like they are really at another group somewhere?

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1998  
1999

Walter D Koenig

Melanerpes formicivorus

LAZ

HNHR

2 June

1500. Opened the (2<sup>nd</sup>) (new) nesthole here (tagged #279).  
4 babies, probably 1 do, + 1 egg (developed, but no sign  
of pipping). The egg measured 26.8 x 19.7.  
Band ~ 21 June.

Plenty of stores here, of course.

30 April

1440. Checked the nest, which is in the hole (previously  
opened) about 4' above #279. It has 4 normal eggs.  
Two were measured (see Joe's notes). Even  
though the granary has fallen here (!) there are  
stores in the forest area (old nest tree by fuel line).

9 July

Stores: yes! Even though the main granary is,  
of course, gone (fell Nov '98).



1993 Walter D Koenig

Melanerpes formicivorus

Bianca

HLHP

3 February

1600. Counted stores: Main<sup>old</sup> tree: }  
Blue oak: 205 } 469  
("New"  
Main tree) Side VO: 264 }

A half-assed job here, as usual. Amazing, given that they even had a fall nest here. Speaking of which, the hole with the fall nest hole (and the 1975 nest hole further o.t.) has fallen within the past couple of months.

7 April

1015. No stores appear to be left here!

12 May

1015. No one here in passing or in any holes.

18 May

915. I was wrong! There are a few stored acorns remaining in the "New" main tree! (But just a few.)

25 May

1100. No sign of anyone here or in any holes. Watched 15 min.

29 May

1015. Check the new hole. It looks like it's not finished yet. Still no sign of anything here.

4 June

1110. Still no sign of anyone here. The new hole is still not finished yet. Possibly this is finally it? Will have to check again, since it's a ladder hole.

12 June

1240. No one in the hole, but a bird flushed from the tree. Could be something going on.

15 June

910. No sign of anyone.

17 June

945. No signs, but there are still a few stored acorns in the "new" main tree! Also, I found a very nice looking hole across the ditch. No obvious activity, but it looks active...?

19 June

1000. Checked the new hole. It looks like it's not finished yet. Still no sign of anything here. Looks nice but it's empty.





1994 Walter D Koenig

Melanerpes formicivorus

HNHR

Bianca

4 February

1230. Counted stores: ("Site" VO)  
New granary: 610 } 880.  
Blue oak: 270 }

11 April

For the first time these birds seem to be taking their new granary seriously. Not bad, compared to prior years.

915. Small-scale power struggle going on here with at least 7-8 birds chasing each other around. So far only

NOBAs seen, 1 banded only

930. ♂ Or-DB #1232  
Or-LB/

along with several ♀ NOBAs and at least 1 ♂ NOBA.

945

1000. Current winners would appear to be ♂ Or-DB 1232 +

2 NOBA ♀♀ and 1 NOBA ♂ (?!). Yes - 4 birds (2♂♂, 2♀♀) would appear to be in control (only the 1 ♂ banded); with 3-5 others off on the peripheries of the territory.

\*

Acorns remain here in the storage facilities.

1000. I'm starting to think it may be 3♂♂ (1 banded) + 1♀ who are in charge. No - There do appear to be 2 NOBA ♀♀.

1005. Leaving. Things still quite active here.

15 April

1100. Quiet here now.

2 May

1550. Bird in hole (traditional tree).

1630. 6 eggs, incubated! Measured: ① 23.8 × 18.5 ② 24.3 × 19.5  
③ 23.6 × 19.2 ④ 23.7 × 19.4 ⑤ 22.5 × 18.0 ⑥ 23.9 × 18.7.

11 May

1130. Checked nest: Totally empty! Still stores, by the way.

1 June

830. Came up with the ladder to check the rotten hole: 4 babies + 1 unhatched egg! ① Yel (19.1) ② Wh (21.0) ③ Blk (18.9)  
④ NOBA (13.8); egg: 23.2 × 17.9 (looks developed). Set up a nest ambusher for the ♀♀.

3 June

1450. Going for 1 of the ♀♀.



Melanerpes formicivorusBianca

HNHR

(3 June) 1545. Well! I saw a NOBA ♀ feed, then ♂ 1232, then a NOBA ♀, then a 2<sup>nd</sup> NOBA fed and I pulled the string - only to discover he was a ♂!! I have no idea who this could be - I'll have to go back through the records and see what clues I might find, if any. In any case, he's now #2490, and there is (~~one~~) at least 1 NOBA ♀ still to be caught here (and presumably two!)

6 June 1450. Going for a ♀. Babies are still fine.  
1520. Got one (#2501)

1540. Have a short time to try for the 2<sup>nd</sup> ♀ (who is definitely here).

8 June 1455. Going for ♀ #2.

1535. Got her. That's all for now. Only other feed was by ♂ 1232.

It just occurred to me that one of these 2 ♀♀ could be a helper - perhaps from the same missed nest that ♂ 2490 may have come from. I see no way of knowing except by fingerprinting.

14 June 1520. Back to give the ♂ (1232) some more bands and to band the kits.

1615. Noone feeding! Going to band the kits anyway.

1645. of which all 4 are still there.

15 June 1200. Back to try for a bit again. No-forget it (no scope!)

16 June 900. OK. Here we go.

920. Got him. Eye (R) blind. Only band left is one on left leg: Or-DBlue. Retarded, etc. Done finally.

22 November 1900. Ambushed this evening at both holes in the nest tree nabbing 6 birds altogether, including the ♀ NOBA that I'd apparently missed this spring (now ♀ 2569).



1995  
1996

Walter D Koenig

Melanerpes formicivorus

Bianca

HNHR

3 May

1045. Still some stores here, but none in any holes.

24 May

Still no sign of a nest here.

25 May

1500. Watched here for  $\sim \frac{1}{2}$  hr. No stores left, and no sign of a nest. But there are at least 3 birds here, generally hanging out over in the granary area (and sometimes flying more or less over to the old nest tree). I don't think we're missing anything.

1996

9 January

1500. Counted stores: "Main" tree: 270 } 350  
Control area: 80 }

This may be better than what I can usually find here in a normal year! Good work!

12 April

1500. No stores left that I can see.



1997  
1998  
1999

Walter D Koenig

Melanerpes formicivorus

Bianca

HNHR

21 April

1100. Opened the hole: 4 babies, no eggs. Weighed one: 22.3g - ~6 do. (Band ~6 May)

10 July

A few stores still in the tree they nested in this spring.

1998

15 May

1545. 3 babies, ~8 days old. Band ~28 May. They now have storage holes, and stores, up here in this tree.

1999

30 April

1500. Stores (in nest tree, up toward UAZ): Yes. Checked nest:

27 May

1200. Banded & bled the 4 kids.

9 July

Stores: Yes! In nest tree on the ridge!









